

Sharon Leitch

12/17/02 10:03 AM

To: tmooney@triumvirate.com

cc: Gary Gosbee/R1/USEPA/US@EPA, Ken

Rota/R1/USEPA/US@EPA, Marv Rosenstein/R1/USEPA/US@EPA,

Jeff Fowley/R1/USEPA/US@EPA, Steve Yee/R1/USEPA/US@EPA,

Juiyu Hsieh/R1/USEPA/US@EPA, (bcc: Sharon

Leitch/R1/USEPA/US)

Subject: (287135631) Region1 WWW Feedback

Dear Tim, this is a response to your e-mail question, listed below, regarding the status of your client's beryllium waste.

The listing for a P-waste specifically states that these types of wastes are any discarded commercial chemical product, any off-specification commercial chemical product, any residue remaining in a container that held any commercial chemical product, and any spill residues thereof. The P015 listing is for beryllium powder and applies to an unused commercial chemical product, that being the beryllium dust or powder. Unless the process by which your client has created this dust is a process where the intent is to produce a commercial chemical product (i.e. beryllium dust), the dust created would not be considered a hazardous waste due to the listing. However, the waste may be hazardous due to a characteristic and it is the responsibility of the generator of the waste to make this determination.

Please note that all of the New England States are authorized to administer and enforce the base RCRA program in lieu of the federal program and, in particular, have the regulatory authority regarding hazardous waste determinations. Therefore, you should consult with the appropriate State authority regarding your question.

Please do not hesitate to contact me if you have any questions regarding this response or require any further assistance.

Sincerely,

Sharon Leitch
Hazardous Waste Unit
EPA Region 1
(617)918-1647
leitch.sharon@epa.gov

comments

I have a question about wheher or not the P015 applies to this waste stream. One of our clients machines beryllium stock. They either start from a piece of cold stock or in alot of cases they are re-machining an existing fixture. For size I am talking about pieces that fit in your hand or in some cases both hands. Small but machined to very specific tolerances. They have a vacuume hose right at the point of machining so they try to capture these minute particles. These particles then travel up a pipe to the baghouse where they are seperated in the hanging bags. Large particles drop to the bottom of the baghouse into a "dirtcan" and the smaller are trapped in the bags. Any that may escape are trapped in the HEPA filter downstream prior to discharge. We are dismanteling this entire process and disposing it for them. Would the "dirtcan" or the baghouse filters be p-listed for beryllium?

Please e-mail me your thoughts.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

November 13, 2002

Yan Li, PE, Senior Engineer
Rhode Island Department of Environmental Management (RIDEM)
Office of Waste Management
235 Promenade Street
Providence, RI 02908-5767

Dear Ms. Li:

EPA New England Hazardous Waste Program Unit received your letter dated September 23, 2002 asking our assistance regarding RIDEM's regulatory authority over rail car operations at a permitted TSDF facility in Rhode Island. Because the nature of the question raised legal issues, Jeffry Fowley of our Office of Regional Counsel has provided the response in the attached memorandum.

If you have any questions, please contact Jeffry Fowley directly at 617-918-1094. Alternately, you may contact Jui-Yu Hsieh of Hazardous Waste Program Unit at 617-918-1646.

Sincerely,

A handwritten signature in black ink, appearing to read "Marvin Rosenstein", is written over the typed name.

Marvin Rosenstein, Chief
Chemical Management Branch
Office of Ecosystem Protection

Attachment:

cc: Gary Gosbee, EPA, OEP
Jeffry Fowley, EPA, ORC
Ken Rota, EPA, OES
Laurie Grandchamp, RIDEM
Stacy Ladner, MEDEP
Peter Marshall, VTDEC
Jim Miller, MADEP
John Duclos, NHDES
Dave Sattler, CTDEP

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 Congress Street, Suite 1100
BOSTON, MA 02114-2023

Memorandum

Date: November 7, 2002

Subj: Regulation of Hazardous Waste Stored in Rail-Car

From: Jeffry Fowley, Office of Regional Counsel

To: Gary Gosbee, Chief, Hazardous Waste Management Unit

On September 23, 2002, the Rhode Island Department of Environmental Management ("DEM") requested a regulatory interpretation from EPA Region I regarding whether hazardous waste stored in a rail-car at the Chem-Pak facility would be subject to State regulations or whether the State regulations would be preempted by the Hazardous Materials Transportation Act, 49 U.S.C. §§ 5101 et seq. ("HMTA"), administered by the U.S. Department of Transportation ("DOT"). Since the DEM's request raised legal issues, it was assigned to me for response.

The DEM is in the process of reissuing a hazardous waste treatment and storage permit to the Chem-Pak facility. In the permit application, the facility has proposed to load blended waste and oils into a rail-car which will be located on a track at the facility. The permit application states that the loading will be done by Chem-Pak employees and that after the completion of loading, the railroad will be notified to pick up the rail car.

The DEM would like to regulate the rail-car as a storage unit while it is located within the boundaries of the Chem-Pak facility. In particular, the DEM would like to require that there be secondary containment around the rail-car. However, in the permit application, Chem-Pak has indicated that it is proposing to follow only DOT regulations while loading and storing hazardous wastes in the rail-car.

In the circumstances presented, it seems clear that the DEM may regulate the rail-car as a storage unit, including by requiring secondary containment. The State regulations are not preempted while the rail-car is being used for on-site storage by Chem-Pak.

Under HMTA, the DOT regulates the transportation of hazardous waste, including loading and storage "incidental to ... movement." 49 U.S.C. § 5102(12). However, the DOT does not regulate storage at fixed facilities which is not "incidental to movement."

Finally, I note that the DOT has a procedure whereby States may seek formal interpretations regarding whether regulations are preempted. See 49 C.F.R. §§ 107.203 et seq. Based on my research, however, seeking such a formal interpretation seems unnecessary, since the lack of preemption seems clear.



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

September 23, 2002

Jui-Yu Hsieh
EPA Region I, CHW
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Dear Ms. Hsieh

I am writing this letter asking for your assistance regarding our regulatory authority over rail car operations at permitted TSDF's. The facility in question (Chem-Pak) is a permitted TSDFs in Rhode Island. In their permit application, Chem-Pak proposed to use the rail car to transport their blended waste and oils to authorized off-site facilities.

It is our desire to regulate the rail car as a storage unit that must meet RIDEM and EPA requirements while it is located within the boundaries of the facility, especially with regard to secondary containment. Our concern is that if the rail car complies with DOT requirements, both RIDEM and EPA regulations may be subject to preemption as per : **49CFR107.202**. We feel a pivotal issue in the determination of regulatory authority will be whether the waste in the rail car is considered to be waste in transit as per 49 U.S.C. 5102(12) as interpreted by USDOT Research and Special Programs Administration and if the requirements in question would be a covered subject of DOT requirements and therefore subject to additional preemption provisions HMTA as amended in 1990.

Your guidance for this matter is greatly appreciated. Thank you very much for your assistance.

Sincerely yours,

Yan Li, PE, Senior Engineer
Rhode Island Department of Environmental Management
Office of Waste Management

Cc: Laurie, Grandchamp, RIDEM/OWM
Ken Rota, EPA, Region I



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1
1 Congress Street, Suite 1100
BOSTON, MA 02114-2023

August 1, 2002

Patricia H. Duft
Staff Vice President, Legal Dept.
Mallinckrodt, Inc.
675 McDonnell Blvd.
St. Louis, MO 63134

Re: Regulatory Interpretation Regarding Mercury From the HoltraChem Manufacturing Company Facility in Orrington, Maine

Dear Ms. Duft:

This is in response to your request for a regulatory interpretation dated May 10, 2002 regarding mercury from the HoltraChem Manufacturing Company facility in Orrington, Maine.

SUMMARY OF REQUEST

You report that there is approximately 84 tons of free-flowing elemental mercury currently being stored in Orrington. The mercury previously was used in mercury cells at the HoltraChem chlor-alkali facility during the production process to manufacture chlorine. For economic reasons, the HoltraChem Manufacturing Company ceased operations at the Orrington facility in September 2000, and the mercury has been stored on site since that time.

According to your letter and a materials Profile submitted with your letter, the mercury is more than 99% pure. Subsequent to your letter, this purity level has been confirmed by having a sample of the mercury analyzed by an independent laboratory, showing a purity level of 99.994%. You note that in the chlor-alkali facility process, the mercury did not chemically react with any of the other materials. It thus did not become contaminated with other materials, and also was not used up or depleted. But for the closure of the plant, it could have continued to be used, as is, in the manufacturing process.

As a prior site owner, Mallinckrodt, Inc. currently is carrying out certain RCRA corrective action remediation activities at the HoltraChem facility. The continued storage of the mercury on site is impeding Mallinckrodt's ability to continue these activities.

The mercury has been offered for sale to Mercury Waste Solutions, Inc. ("MWS"). MWS is in the business of reselling mercury in commerce. You report, however, that pursuant to

Agreements planned to be signed by MWS and the Natural Resources Council of Maine ("NRCM"), the mercury temporarily will be stored at MWS's facility in Union Grove, Wisconsin rather than immediately being resold as a product. According to drafts of the Agreements submitted to the EPA on August 1, 2002, the mercury will be stored for at least four years. At the end of the four-year period, MWS and NRCM may continue the storage on an annual basis, not to exceed a total storage period of eight years. At the request of the NRCM, MWS has agreed that if during the period of storage, there is a change in current law, regulations and/or policy, and a mercury retirement policy is established, MWS will sell the mercury to the United States government or another entity in accordance with the retirement policy. However, MWS has reserved the right to sell the mercury in commerce at the end of the first four year storage period, if MWS determines that it could be adversely impacted by major changes in cost structure or regulations by continuing to store the mercury. In any event, unless there is a change in law, regulations and/or policy, MWS has the right, and intends, to sell the mercury in commerce by no later than the end of the eight year storage period. The mercury does not need to be reclaimed by MWS prior to reselling it as a product since it is already greater than 99% purity. MWS has no plans to refine the mercury to further increase the purity, at this time.

You request a regulatory interpretation as to whether the mercury may be handled as a product, rather than as a hazardous waste under the federal regulations promulgated pursuant to the Resource Conservation and Recovery Act ("RCRA"). Although you believe that the mercury is a product, you note that MWS is a licensed hazardous waste storage facility, and has agreed to store the mercury in accordance with safe handling requirements. According to the draft Agreements submitted to the EPA, the mercury will be stored in containers which will be inspected daily to ensure their integrity, inspected weekly with full documentation, and monitored by mercury vapor analyzers to ensure proper containment. You further note that the mercury will be transported from Maine to Wisconsin by a licensed hazardous waste transporter.

RESPONSE

Maine and Wisconsin both have been authorized by the EPA to administer State hazardous waste programs. Thus whether the mercury is a product or hazardous waste must be determined in accordance with Maine law which applies until the mercury leaves Maine and in accordance with Wisconsin law which will apply once the mercury reaches Wisconsin. However, the EPA is responding to your regulatory interpretation request in order to provide you with guidance regarding the federal hazardous waste regulations, since the federal regulations set the requirements which all States must follow at a minimum.

EPA Region I is responding to your request because whether a material is a hazardous waste must initially be determined by the generator where the material is generated, and the mercury has been generated in this Region. However, since the plan is to ship the mercury to a facility within EPA Region V, we have consulted with that EPA Region and with the Office of Solid Waste at EPA Headquarters prior to sending you this response.

In response to your request, we agree, first, that mercury which is at least 99% pure is of product quality. The EPA consistently has stated that 99% pure mercury is of product quality because

it is reusable as is, or requires only further refining (e.g., to 99.99% purity), rather than more substantial reclamation, to be reusable. See Letter from Matthew A. Straus, EPA Office of Solid Waste, to D.F. Goldsmith Chemical and Metal Corp. dated January 21, 1986; Letter from Matthew A. Straus, EPA Office of Solid Waste, to Bethlehem Apparatus Company, Inc., dated May 30, 1986; Letter from David Bussard, EPA Office of Solid Waste, to Appropriate Technologies, II, Inc., dated March 19, 1991. Thus the HoltraChem mercury appears to be of product quality.

Although the HoltraChem mercury was used in an industrial process, we agree that it has retained its status as a commercial chemical product rather than becoming a spent material. Under the federal regulations, a spent material is "any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing." 40 C.F.R. § 261.1(c)(1). While the HoltraChem mercury has been used, neither contamination with impurities nor any other factor or circumstance has caused this mercury to become unsuitable for commercial purposes or to need reprocessing. Thus the mercury has not become "spent."

As a commercial chemical product, the HoltraChem mercury is not subject to regulation as a hazardous waste under the federal regulations so long as it is not "discarded." Commercial chemical products being stored for the purpose of disposal are considered to have been "discarded" and thus are subject to regulation. See 40 C.F.R. § 261.2(b)(3). However, commercial chemical products being stored in order to be recycled as products are not considered to have been "discarded," unless they are burned for energy recovery or used in a manner constituting disposal. See *id.* § 261.2(c). See also 40 C.F.R. § 261.33.

Whether the HoltraChem mercury when shipped to MWS will become "discarded" depends upon the particular arrangement made with MWS. Based on your representations regarding the terms of agreement, and our review of the draft Agreements, it appears that the mercury will retain its product status under the federal regulations when being stored by MWS, unless and until a determination is made that the mercury will be "retired."

The key element of the arrangement (as represented by you and reflected in the draft Agreements), that will give this mercury continued product status, is that MWS has the right, and intends, to sell the mercury for commercial purposes at the end of the storage period, unless there is a law, regulatory and/or policy change. That the mercury might be retired if there is a law, regulatory and/or policy change simply means that the mercury may become "discarded" at a future point; it does not make the mercury a hazardous waste at this point. That the mercury may be stored for as long as eight years prior to being resold also does not remove its product status, in the particular circumstances of this case. In other circumstances, the EPA might question the legitimacy of a claim that commercial chemical products being stored long term without being sold are products. In this case, however, there is a commercial market for mercury such that the HoltraChem mercury could be immediately resold. It will be stored only in response to the concerns of environmental organizations, in order to help promote an environmental purpose. We do not think that RCRA should be interpreted to impose greater regulation on a company which plans to sell a product (absent a law, regulatory and/or policy change) after promoting an

environmental purpose than would be imposed in the absence of carrying out the environmental purpose.

In answering your inquiry, we have assumed that the HoltraChem mercury is a secondary "material" potentially subject to regulation under RCRA, since the mercury was used in an industrial process. However, so long as it is recycled back into commerce or stored in order to be recycled back into commerce, the mercury (even if a secondary material) will remain classified under the federal regulations as a non-regulated product. See 40 C.F.R. § 261.2(c). So long as the mercury retains its product status, it will not be subject to any RCRA regulatory requirements under the federal regulations. In particular, the limitations on storage time set by RCRA section 3004(j), 42 U.S.C. § 6924(j), and 40 C.F.R. § 268.50 will not apply. The speculative accumulation provisions in 40 C.F.R. § 261.2 also will not apply, since commercial chemical products are not subject to these speculative accumulation requirements. See id., Table 1.

We recognize that the Maine Department of Environmental Protection has determined that the HoltraChem mercury is a hazardous waste under Maine State law. The State acted pursuant to its authority under RCRA to impose requirements which go beyond the minimum federal hazardous waste requirements. However, Maine's interpretation does not set a precedent for interpreting the federal RCRA regulations. The federal and Maine RCRA regulations are worded quite differently. Maine generally regulates as a waste any substance or material which is "unwanted" by the generator of the material "whether or not such substance or material has any other or future use." Maine Hazardous Waste Management Rules, Chapter 850, section 3A. In contrast, as noted above, under the federal regulations, when a commercial chemical product is unwanted by the generator, it may nevertheless be handled as a product, providing that it is being recycled for another or future commercial use. There thus is no inconsistency between classifying the mercury as a hazardous waste under Maine law and classifying it as a product under the federal regulations.

As a result of the Maine classification, the HoltraChem mercury will need to be handled as a State-only hazardous waste until it leaves the State of Maine. It will need to be shipped to the State of Wisconsin under a hazardous waste manifest using a licensed hazardous waste carrier. As a licensed hazardous waste storage facility, MWS will need to sign on the manifest that it has received this hazardous waste. However, once MWS has received and signed for the mercury, it will then be able, according to the federal regulations, to convert the mercury back to product status.

Our determination that the HoltraChem mercury may be handled as a product is subject to the following important qualifications. First, it is of course based on all of the representations contained in your letter being accurate. Second, as indicated above, the actual determination of whether the mercury will be a product or a hazardous waste when stored in the State of Wisconsin needs to be made in accordance with Wisconsin law. We suggest that Wisconsin State authorities be contacted in advance of any shipment to that State, to obtain their interpretation. As noted above, a State has the right to impose requirements which go beyond the minimum federal hazardous waste requirements. Third, even if State hazardous waste regulatory requirements are determined not to apply to the storage of this mercury in Wisconsin, it is

imperative that the mercury be safely stored. Among other things, poor management of the mercury could suggest that the mercury was not being carefully handled as a valuable product and thus could call into question its classification as a product. For this reason as well as safety reasons, we support the plan to include, in the Agreements with MWS, specifications regarding how the mercury will be stored.

Finally, if and when a decision is made to retire the mercury (including if there is storage for the purpose of retirement), further guidance from the EPA and the relevant State authorities should be sought. As indicated above, under current federal RCRA regulations, mercury being retired or stored for the purpose of retirement would need to be handled as a hazardous waste.

I hope that this answers your questions and that the important task of removing this mercury from the HoltraChem facility now moves forward. Should you have any further questions or concerns, please feel free to contact me at tel: 617-918-1631 or Jeffry Fowley in our Office of Regional Counsel at tel: 617-918-1094.

Sincerely,



Marvin Rosenstein, Chief
Chemical Management Branch

cc: Robert Dellinger, EPA Office of Solid Waste
Robert Springer, EPA Region V
Michael Ellenbecker, Wisconsin DNR
Scott Whittier, Maine DEP

a minimum, the D001 waste number is likely to apply.

Response:

The Solvent Mixture Rule promulgated at 50 FR 53315, 12/31/85, provides that a mixture containing F003 solvents would retain the listing under the following two conditions: the mixture contains: (1) only F003 constituents, or (2) one or more F003 constituents and 10% or more by volume of one or more of F001, F002, F004 and F005 listed solvents, prior to use.

The F003 listing also covers mixtures of F003 solvents and other substances such as isopropyl alcohol and water if the mixtures are technical grade solvent formulations, which are used for their solvent properties. The term technical grade refers to all grades of a chemical which are marketed or recognized for general usage by the chemical industry. Solvent formulations containing de minimis percentages of manufacturing contaminants or impurities are considered technical grade products, provided that they are available for purchase and use in this form. In other words a technical grade solvent could contain small concentrations of contaminants or manufacturing impurities and still meet the F003 listing after being used for its solvent properties. The purity of a technical grade formulation will vary from compound to compound and may range from highly purified to very impure. EPA has not established specific percentages or other criteria for use in determining when contamination is considered de minimis, such a decision must be made on a case by case basis. (RCRA Online, 6/1/94, Faxback 13675)

In the first scenario, acetone (an F003 solvent) is blended with a constituent (isopropyl alcohol) other than F003 constituents; in the second scenario, acetone is diluted with water. In both cases, the determination as to whether the mixture will retain the F003 listing is dependent upon whether or not the mixture is considered a technical or commercial grade solvent.

EPA New England does not have adequate information at this time to assess what percentage of isopropyl alcohol or water in acetone will qualify acetone mixture as technical or commercial grade. It is recommended that the generator check with manufacturers to determine if acetone which contains 0.7% to 0.9% isopropyl alcohol or 10% to 15% water is considered commercial or technical grade. If it qualifies as commercial or technical grade, once spent, it would still meet the F003 listing. If it is not commercial or technical grade, this reason why the acetone mixture does not meet the F003 listing criteria should be documented, and the mixture should be tested for the characteristic of ignitability.

Please note that the New England States in accordance with Section 3006 of the Resource Conservation and Recovery Act (RCRA), are authorized to administer and enforce the base RCRA program in lieu of federal program and, in particular, have regulatory authority regarding hazardous waste determinations for 40 CFR 261 - Identification and Listing of Hazardous Waste. Therefore, you should also consult with the appropriate state personnel regarding all of your

Ms. Richards

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requests.

I hope the above responses address your concerns. It should be noted that EPA has since published two corrections to the revised mixture and derived-from rule (66 FR 50332 and 66 FR 60153). However, these corrections and extension of the effective date on this rule should not affect today's responses. If you have any further questions, please contact Ms. Jui-Yu Hsieh in my Hazardous Waste Unit at 617-918-1646.

Sincerely,



Marv Rosenstein, Chief
Chemical Management Branch
Office of Ecosystem Protection

cc: Gary Gosbee , EPA, OEP
Jeffry Fowley, EPA, ORC
Ken Rota, EPA, OES
Matt Hoagland, EPA, OSRR
Laurie Grandchamp, RI DEM
Jim Miller, MA DEP
Dave Sattler, CT DEP
Stacy Ladner, ME DEP
Peter Marshall, VT DEC
John Duclos, NH DES

June 18, 2001

Ms. Juiyu Hsieh
US EPA New England, Region 1
1 Congress Street, Suite 1100 (CHW)
Boston, Massachusetts 02114-2023

Re: *Land Disposal Restriction Regulations*
One-Time Notification for Exempted Wastes

Dear Ms. Hsieh:

As we discussed by telephone, I am requesting assistance with an interpretation of the land disposal restriction regulation requirements applicable to generators. My questions are:

1. A generator uses an F003-listed solvent, or a D001 characteristic solvent to spray onto a metal part for cleaning, then wipes the part with a cloth and collects the cloth in a container. The "spent solvent" is hazardous for a few seconds while it is on the part, before it is wiped with the cloth. However, the cloth/solvent mixture no longer exhibits the characteristic of ignitability and therefore, no longer meets the definition of a hazardous waste pursuant to the mixture rule in 40 CFR 261.3. 40 CFR 261.3(g)(3) (in effect on August 14, 2001) states that wastes excluded under this section are subject to part 268 (as applicable) even if they no longer exhibit a characteristic at the point of land disposal. 40 CFR 268.7(a)(7) indicates that a one-time LDR notice to the generator's file is required if the waste is excluded "subsequent to the point of generation."

Would this waste, as described above, be considered to be excluded "subsequent to the point of generation" because it was a hazardous waste (either F003 or D001) for a few seconds prior to wiping with the cloth, or would the point of generation be when the contaminated cloth is generated and placed in a collection container (thus it is never a hazardous waste to begin with)? If this waste is subject to the LDR requirements, which requirements apply? (i.e., the one time notice to the generator's file per 268.7(a)(7), the one-time notice to US EPA pursuant to 268.9(d), the notice to the disposal facility when the waste is shipped offsite pursuant to 268.7(a)(3), and/or the requirement for a waste analysis plan pursuant to 268.7(a)(5)?) Does it make any difference whether the solvent used is an F003-listed solvent or a D001 only solvent? Does it make any difference if the solvent is first applied to the cloth rather than the part being cleaned?

2. Which of the LDR requirements apply to a generator treating a corrosive hazardous waste in an exempt elementary neutralization system, or other hazardous wastes in exempt units such as wastewater treatment units or totally enclosed treatment facilities? (i.e., the one time notice to the generator's file per 268.7(a)(7), the one-time notice to US EPA pursuant to

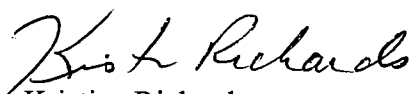


268.9(d), the notice to the disposal facility when the waste is shipped off site pursuant to 268.7(a)(3), and/or the requirement for a waste analysis plan pursuant to 268.7(a)(5)?)

I would appreciate a written response to my questions as soon as possible. If you require any clarification on my questions or would like to discuss them further prior to preparing your written response, please call me at (401) 421-0398, Extension 179. Thank you.

Sincerely,

ENVIRONMENTAL SCIENCE SERVICES, INC.



Kristina Richards
Senior Environmental Engineer

June 18, 2001

Mr. Gary Gosbee
EPA New England, Region 1
1 Congress Street, Suite 1100 (CHW)
Boston, Massachusetts 02114-2023

Re: *Hazardous Waste Identification; F003 Listing Interpretation*

Dear Mr. Gosbee:


I am requesting assistance with an interpretation of the F003 hazardous waste listing in 40 CFR 261.31. My questions are:

If an F003-listed solvent, in this case, acetone, is to be used at a generator's facility for cleaning purposes; however, prior to use, the acetone is blended with 0.7% to 0.9% isopropyl alcohol, does the spent solvent meet the F003 listing? Because the solvent being used is not pure acetone, it seems that this waste would not meet the F003 definition. What if the acetone were mixed with 10% to 15% water prior to use rather than isopropyl alcohol? Again, it seems that the spent solvent would not meet the F003 listing in this scenario. I understand that in both cases, the characteristics of the waste need to be determined and that, at a minimum, the D001 waste number is likely to apply.

I would appreciate a written response to my questions as soon as possible. Thank you.

Sincerely,

ENVIRONMENTAL SCIENCE SERVICES, INC.


Kristina Richards
Senior Environmental Engineer



s:\correspondence\epa\f003 interpretation.doc

Faxback 11900

9441.1995(10)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20469

March 8, 1995

Mr. Christian M. Richter
Washington Representative
American Foundrymen's Society
900 2nd St. N.E. Suite 109
Washington D.C. 20002

Dear Mr. Richter:

I am writing in response to your letter to me of October 31, 1994, and as a follow-up to the November 1994 and February 28, 1995 meetings between representatives for the American Foundrymen's Society (AFS) and the U.S. Environmental Protection Agency (EPA) on the regulatory status of spent foundry sand under the Resource Conservation and Recovery Act (RCRA). Thank you for reviewing with us the use and role of sands in the foundry process and reiterating the industry's concerns.

The two RCRA regulatory concerns at issue which you have raised are: 1) whether spent foundry sands are solid and hazardous wastes within the sand loop and at what point do they become wastes, and 2) what is the regulatory status under RCRA of the type of thermal reclamation units discussed at our meeting, which are used to remove clay and resin binders from spent sands prior to reuse in mold making. The opinions expressed below are based on your general factual description and thus necessarily represent our initial conclusions, not final agency action. In addition, nothing in this letter should be considered to compromise, or to address the merits of any enforcement actions.

With regard to the first issue, for reasons stated below, EPA believes that spent foundry sands are solid wastes at the point at which the mold is broken and the sand is separated from the casting at the shakeout table. These solid wastes are also hazardous wastes if they exhibit the characteristic of toxicity for lead or other hazardous constituents specified at 40 CFR 261.24. Moreover, the process of separating bits and pieces of metal, fines, core sand butts and other clumps of mold sand at the shakeout table and screen to create return sand (for reuse in the

conveyors and screens.

Sand (hereafter referred to as return sand) which passes through the drum and screens is returned to the moldmaking process to be used to make new molds. The entire process of making sand molds and reclaiming return sand for producing new molds is referred to as the sand loop.

Some chunks of sand from the broken molds and cores cannot be broken down and are too large to fit through the drum/screening process. This sand together with bits and chunks of metal (referred to as tramp metal), is removed from the screening process and sent to a ball mill where the mixture is milled and remaining metal is removed for reinsertion into the casting process or sold for recycling. Iron may be added to the clumps of sand prior to or during the milling process in an attempt to fix lead in the sand. The milled sand is then sent to a municipal or on-site industrial landfill.

B. Overview of Spent Foundry Sand Management

As you mention in your incoming letter to EPA, AFS estimates that 100 million tons of sand used to make molds in the ferrous and non-ferrous foundry industry and that approximately 94 percent of these sands are reused within the industry. In an April 26, 1993 article of American Metals Market, AFS is quoted as estimating that only about 4 percent, or 240,000 tons of the estimated 6 million tons of discarded foundry sand are hazardous waste. The article indicates that this is particularly a problem with manufacturers of leaded brass. However, Dan Twarog, AFS Director of Research, indicated in this article that contamination of foundry sands "is not a huge problem".

Based on data submitted to EPA by brass foundries, most spent foundry sands which are hazardous wastes are classified as such because they exhibit the characteristic of toxicity for lead, D008. In addition, one brass foundry exporting its sands for use in Canada reported that the sand exhibited the characteristic of toxicity for cadmium, D006.

2. RCRA Subtitle C Regulatory Status of Spent Foundry Sands and Thermal Reclamation Unit

As stated above, AFS has raised two particular issues for EPA's consideration: 1) is spent foundry sand a solid waste and when is it generated, and 2) what is the regulatory status of thermal reclamation units for spent foundry sand. Each of these issues is discussed in turn.

(exempting actual recycling processes from regulation unless otherwise specified).

However, with respect to the portion of foundry sands that is removed from the reclamation process and is not beneficially reused, foundries remain subject to all applicable RCRA standards for managing these materials under 40 CFR Part 262. These standards include manifesting and standards for storage in tanks, containers, drip pads and containment buildings, as set out in Section 262.34. In addition transporters of these hazardous wastes are subject to 40 CFR Part 263. Furthermore, foundries that treat these hazardous wastes in conformance with these less-than-90 day storage provisions would not be subject to RCRA permitting requirements. Our expectation is that operating foundries should be able to operate in ways such that they do not trigger requirements for RCRA permits pursuant to the Federal regulations.

EPA's views about the point of generation for jurisdiction purposes do not imply that we believe that the non-thermal reclamation process of screening and separating sand following the separation of the casting requires a RCRA Subtitle C permit. When this screening and separation of sand is part of a reclamation process, it is exempt from RCRA Subtitle C regulation. 40 CFR 261.6(c)(1). Nor does this opinion imply any belief on the part of the Agency that state regulation under Subtitle D of RCRA is warranted for nonhazardous foundry sands undergoing reclamation. The scope of our regulatory concern is limited to foundry sands which are considered characteristically hazardous under Subtitle C of RCRA.

Notwithstanding these points, EPA cannot agree that the point of generation occurs after the sand mold is separated from the casting. The AFS interpretation, that foundry sands are generated after processing at the shakeout table, would have two adverse effects that are potentially damaging to human health and the environment.

First, some foundries would be able to add iron to spent foundry sands which are destined for land disposal (including both clumps of sand molds and sand cores as well as sand fines that are collected from emissions from the shakeout table) and argue that the spent sands were solid wastes, but never hazardous waste. This argument would be based on the assumption that they were "generated" after the addition of iron, possibly masking the toxicity characteristic for lead. It would follow that these foundries would not be subject to standards required for hazardous waste generators treating characteristic wastes in tanks, notwithstanding that they are engaged in a classic treatment activity. Moreover, these iron-treated sands would not be subject

occurs in the fluidized bed. As a result, the organic resins, binders and solvents are destroyed.

Under the Agency's regulatory regime, thermal treatment devices are classified as either boilers, industrial furnaces, incinerators, other interim status thermal treatment units, or miscellaneous permitted treatment units. Definitions of a boiler, industrial furnace, and incinerator are provided in 40 CFR 260.10. If a thermal treatment device does not meet the definition of boiler or industrial furnace, it is classified as an incinerator if it uses controlled flame combustion; if it does not, it is either an interim status thermal treatment unit (Part 265 Subpart P) or a miscellaneous permitted treatment unit (Part 264 Subpart X).

The thermal sand reconditioning device you presented to us is not a boiler because it does not recover and export energy. It does not meet the definition of an industrial furnace because it is not one of the enumerated devices listed as an industrial furnace in Section 260.10. Thus, our analysis focuses on whether the device should be regarded as either an incinerator or a miscellaneous/other treatment unit.

Given that the device uses controlled flame combustion to burn natural gas and that the combustion gases are exhausted into the combustion chamber containing the spent sand, the device should be classified as an incinerator. Among other considerations, although not dispositive in themselves, are: (1) the temperature in the combustion chamber would be carefully controlled to what is claimed to be the optimum combustion temperature of the resin contaminants; and (2) the temperature would be controlled by modulating the natural gas burner in the firebox, or, in some designs, burners in the combustion chamber itself.

AFS has maintained that because, in its opinion, sand which is part of the sand loop is not discarded and therefore not a solid waste, that spent foundry sand which is destined for a thermal reconditioning unit is also not a solid waste. For this reason, AFS maintains that thermal recondition units of the type described in our November 16 meeting are not incinerators, but rather part of a manufacturing process used to recondition sand for reuse within the mold making process.

For the reasons stated above, the AFS argument that spent foundry sand is not a solid waste does not appear to be sound. To reiterate, the sand from the broken mold is not fit for its original use as a mold without substantial reprocessing. If the sand is reprocessed through thermal reconditioning rather than or

foundries, the used sand mixtures contain sufficient hazardous constituents (e.g., lead, cadmium, toxic organic compounds) to pose a threat to human health and the environment if managed improperly. EPA has three major environmental concerns regarding management of spent foundry sand: 1) landfill disposal of spent foundry sand, including treatment with iron prior to land disposal, 2) thermal processing of spent foundry sand, and 3) the storage and actual management practices for spent foundry sands prior to disposal.

A. Landfill Disposal of Spent Foundry Sands; Treatment of Lead-Contaminated Sand With Iron Filings

As discussed in our meeting and indicated in prior correspondence on behalf of AFS member companies, some portion of spent sand is continuously removed from the sand loop in some foundries and disposed of in landfills. For those foundries whose sand contains hazardous constituents, such as lead, cadmium and organics, the Agency has a strong interest in seeing that these sands are properly managed. Left untreated, lead-contaminated sands may result in releases to groundwater, possibly threatening nearby drinking water wells. Improper disposal of untreated hazardous waste has historically led to many landfills becoming Superfund sites. Thus, when foundry sands exhibiting the hazardous characteristic for lead are land disposed, these materials must be properly treated and disposed of in appropriate facilities in order to prevent the creation of future hazardous waste remediation sites.

Effective treatment for hazardous waste being land disposed must assure the long-term immobilization of hazardous constituents to minimize potential short and long term threats to human health and the environment. RCRA Section 3004(m). We understand that some foundries attempt to treat their hazardous waste foundry sand with iron filings prior to land disposal, in an effort to reduce the leachability of the hazardous constituents (typically lead) so that the waste can be land disposed. EPA is concerned, however, that the addition of iron filings to lead-contaminated foundry sands is ineffective as a long-term treatment method and that it could constitute impermissible dilution under 40 CFR 268.3.

In developing the Land Disposal Restriction program in the Hazardous and Solid Waste Amendments of 1984 (HSWA), Congress stated that only dilution that occurs during the normal manufacturing process may be taken into account in setting section 3004(m) treatment standards. Senate Report No. 284. 98th Cong. 1st Sess. at 17. Since the addition of iron occurs only to stabilize lead in the spent sand prior to disposal, it does not appear to be part of a normal production process.

Michael Petruska of my staff at (202) 260 8551. If you have any questions about the status of thermal reclamation units under RCRA as incinerators, please contact Robert Holloway of my staff at (703) 308-8461. Again, we appreciate your patience in arranging for the meeting and your coming to Washington to discuss the issue with us.

Sincerely,

Michael Shapiro, Director
Office of Solid Waste

Enclosure

Attachment

American Foundrymen's Society Inc.
900 2nd Street, N.E.
Suite 109
Washington, D.C. 20002

October 31, 1994

Michael Shapiro, Director
Office of Solid Waste, M2101
USEPA Waterside Mall
401 M Street S.W.
Washington, D.C. 20410

Dear Mr. Shapiro:

Representatives of the American Foundrymen's Society (AFS) would like to meet with you and David Bussard to discuss several critical policy issues raised by recent Region 6 enforcement actions against foundries. We are concerned that Region 6 has seriously misapplied current USEPA regulatory policy regarding solid waste and recycling under the Resource Conservation and Recovery Act (RCRA).

I. BACKGROUND

EPA Region 6 officials have targeted two brass and bronze foundries for enforcement action under RCRA. Region 6 contends that one of the industry's primary raw materials -- sand -- when reused in an ongoing production process on-site, is a solid waste. It is our understanding that the set of facts in each of these cases is unique.

However, the two cases raise important questions regarding the

Sincerely,

Christian M. Richter
AFS Washington Representative

cc: David Bussard, EPA Characterization and Assessment Division
Elliot Laws, Asst. Administrator for Solid Waste and Emergency Response
Leon Hampton, EPA Office of Small and Disadvantaged Business
Utilization
Karen Brown, EPA Small Business Ombudsman
Mike Stahl, EPA Office of Enforcement

Faxback 11426

9441.1989(19)

OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

APR 26 1989

MEMORANDUM

SUBJECT: F006 Recycling

FROM: Sylvia K. Lowrance, Director
Office of Solid Waste (OS-300)

TO: Hazardous Waste Management Division Directors
Regions I-X

It has come to the attention of EPA Headquarters that many of the Regions and authorized States are being requested to make determinations on the regulatory status of various recycling schemes for F006 electroplating sludges. In particular, companies have claimed that F006 waste is being recycled by being used as: (1) an ingredient in the manufacture of aggregate, (2) an ingredient in the manufacture of cement, and (3) feedstock for a metals recovery smelter. The same company may make such requests of more than one Region and/or State. Given the complexities of the regulations governing recycling vs. treatment and the definition of solid waste, and the possible ramifications of determinations made in one Region affecting another Region's determination, it is extremely important that such determinations are consistent and, where possible, coordinated.

Two issues are presented. The first issue is whether these activities are legitimate recycling, or rather just some form of treatment called "recycling" in an attempt to evade regulation. Second, assuming the activity is not sham recycling, the issue is whether the activity is a type of recycling that is subject to regulation under sections 261.2 and 261.6 or is it excluded from our authority.

With respect to the issue of whether the activity is sham recycling, this question involves assessing the intent of the owner or operator by evaluating circumstantial evidence, always

-2-

a difficult task. Basically, the determination rests on whether the secondary material is "commodity-like." The main environmental considerations are (1) whether the secondary material truly has value as a raw material-product (i.e., is it likely to be abandoned or mismanaged prior to reclamation rather

supplemental proposal of the Boiler and Industrial Furnace rule noted above, the Agency will be proposing a definition of "indigenous waste" based on a comparison of the constituents found in the waste to the constituents found in an analogous raw material. Should the F006 waste meet the definition of an "indigenous waste," the waste would cease to be a waste when introduced the process and the slag would not be derived from a hazardous waste.]

Also, you should be aware that OSW is currently reevaluating the regulations concerning recycling activities, in conjunction with finalizing the January 8, 1988 proposal to amend the Definition of Solid Waste. While any major changes may depend on RCRA authorization, we are considering regulatory amendments or changes in regulatory interpretations that will encourage on-site recycling, while ensuring the protection of human health and the environment.

Headquarters is able to serve as a clearinghouse to help coordinate determinations on whether a specific case is "recycling" or "treatment" and will provide additional guidance and information, as requested. Ultimately, however, these determinations are made by the Regions and authorized States. Attached to this memorandum is a list of criteria that should be considered in evaluating the recycling scheme. Should you receive a request for such a determination, or should you have questions regarding the criteria used to evaluate a specific case, please contact Mitch Kidwell, of my staff, at FTS 475-8551.

Attachment

-4-

CRITERIA FOR EVALUATING WHETHER A WASTE IS BEING RECYCLED

The difference between recycling and treatment is sometimes difficult to distinguish. In some cases, one is trying to interpret intent from circumstantial evidence showing mixed motivation, always a difficult proposition. The potential for abuse is such that great care must be used when making a determination that a particular recycling activity is to go unregulated (i.e., it is one of those activities which is beyond the scope of our jurisdiction). In certain cases, there may be few clear-cut answers to the question of whether a specific activity is this type of excluded recycling (and, by extension, that a secondary material is not a waste, but rather a raw material or effective substitute); however, the following list of criteria may be useful in focusing the consideration of a specific activity. Here too, there may be no clear-cut answers, but, taken as a whole, the answers to these questions should help draw the distinction between recycling and sham recycling or treatment.

(1) Is the secondary material similar to an analogous raw material or product?

consistent with the raw material/product it replaces?

Is the secondary material stored on the land?

Is the secondary material stored in a similar manner as the analogous raw material (i.e., to prevent loss?)

Are adequate records regarding the recycling transactions kept?

Do the companies involved have a history of mismanagement of hazardous wastes?

(6) Other relevant factors.

What are the economics of the recycling process?
Does most of the revenue come from charging generators for managing their wastes or from the sale of the product?

Are the toxic constituents actually necessary (or of sufficient use) to the product or are they just "along for the ride."

These criteria are drawn from 53 FR at 522 (January 8, 1988); 52 FR at 17013 (May 6, 1987); and 50 FR at 638 (January 4, 1985).



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095

(603) 271-2900 FAX (603) 271-2456

May 19, 2000

0002 03 MAY



MAY 30 2000

Mr. Edward K. McSweeney, Associate Director
Office of Waste Policy
USEPA Region 1
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Dear Mr. McSweeney:

The New Hampshire Department of Environmental Services (NHDES) has received a request for a regulatory determination from a foundry located in New Hampshire. The foundry has a bronze foundry operation that generates spent foundry sand. This foundry sand is hazardous waste for the characteristic of lead at 25 Parts Per Million (PPM) under the Toxicity Characteristic Leaching Procedure. The foundry has proposed delivering this spent foundry sand to Noranda Metallurgy, Inc., Horne Smelter, Rouyn-Noranda, Quebec, Canada (Noranda) as an effective substitute for a commercial product (i.e., silica flux) per 40 CFR 261.2(e)(1)(ii).

The foundry supplied an assay of the spent foundry sand to confirm that Noranda could use this spent foundry sand as a substitute for silica flux. The spent foundry sand is reported to contain 60% silica sand, 32% copper, 2% bentonite clay, 2,000 ppm total lead and 2,500 ppm total zinc. The foundry supplied documentation from Noranda that this material is an effective substitute in their smelting operation as a fluxing agent and would be directly reused without any preparation. The foundry supplied documentation from the Canadian Ministry of the Environment approving this material as a fluxing agent. In addition, the foundry provided documentation that the toxics (lead) contained in the spent foundry sand will be vitrified and unleachable as a result of the smelting process.

Noranda is a primary Copper Smelter, as a primary copper smelter, the copper that is contained in the bronze (32% of the total weight) will be reclaimed. NHDES is requesting EPA's interpretation on the following separate scenarios to clarify the recycling of spent foundry sand issue:

1. The spent foundry sand is sent to a primary copper smelter as an effective substitute for silica flux with reclamation of the copper but no reclamation of the lead. In this scenario would the spent foundry sand be considered a solid waste?
2. As an alternative, the spent foundry sand is sent to a primary lead smelter as an effective substitute for silica flux with reclamation of the lead. In this scenario would the spent foundry sand be considered a solid waste?
3. If the above two scenarios were sent to a secondary smelter, would this change EPA's interpretations?



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DEC 11 2001

James Jackson, Director
Department of Safety and Risk Management
University of Rhode Island
177 Plains Road
Kingston, RI 02881-0801

Re: Closure Certification Review
EPA I.D. No. RID075705780

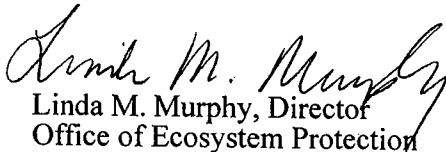
Dear Mr. Jackson:

The United States Environmental Protection Agency-New England (EPA) has reviewed the Closure Certification Report for the University of Rhode Island (URI) Old Dairy Barn dated July 2001 and the URI Old Dairy Barn Closure Documentation Report Addendum dated November 13, 2001, prepared by VHB/Vanasse Hangan Brustlin, Inc. on behalf of the University of Rhode Island. The report covers the closure of the Old Dairy Barn Dry Well located at the University of Rhode Island in South Kingstown, Rhode Island.

The Closure Certification Report is in compliance with the requirements of 40 CFR Part 265, Subpart G and documents that URI has closed its Old Dairy Barn Dry Well in accordance with the approved closure plan dated January 2000 and the Site Characterization Report dated May 2000. In addition, EPA conducted a site visit on June 14, 2001 and confirmed that all closure activities have been implemented. Please note that nothing in this release relieves URI for any liability for releases into the environment heretofore undetected, unknown or not directly related to the operation of the Old Dairy Barn Dry Well.

If you should have any questions, please do not hesitate to contact Stephen Yee of the Hazardous Waste Unit at (617) 918-1197.

Sincerely,


Linda M. Murphy, Director
Office of Ecosystem Protection

Enclosure

cc: Greg Fine, RIDEM, Site Remediation Program, OWM
Yan Li, RIDEM, OWM
Tom Angelstone, RIDEM, UIC Program
Robert Mendoza, EPA
Gary Gosbee, EPA
Jim Gaffey, EPA
Frank Battaglia, EPA
Timothy O'Connor, Vanasse Hangen Brustlin, Inc.

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I - BOSTON**

December , 2001

Mr. Edward W. Pickering
Environmental Science Services, Inc.
272 West Exchange Street, Suite 101,
Providence, Rhode Island 02903

Re: Applicability of Household Hazardous Waste Exemption in University Dormitories.

Dear Mr. Pickering:

Thank you for your letter of June 19, 2001 to Mr. Ken Rota requesting clarification of the applicability of the exemption for household hazardous waste (HHW) in 40 CFR 261.4(b)(1). Specifically, you asked whether this exemption applies to certain wastes generated in dormitories and other housing facilities owned and operated by colleges and universities?

The following are the two scenarios that you described in your letter, and our responses.

1. A student completes homework assignments in his/her private room in a dormitory or other housing facility. Some assignments, such as art and modeling projects, result in generation of spent solvents, paints and other wastes that would meet the definition of listed hazardous waste and/or characteristic hazardous wastes. Are these wastes exempt under the household waste exemption?

Response: In order for a waste to meet the HHW exemption, it has to meet two criteria, the waste must be generated by individuals on the premises of a temporary or permanent residence, and be composed primarily of materials found in the wastes generated by consumers in their homes. (49 FR 44978; November 13, 1984). In general, EPA would consider wastes from student art and modeling homework assignments generated in this manner to be exempt under the household hazardous waste exemption. The exception would be if homework assignments were given for the purpose of avoiding regulation. For example, a university could not claim the HHW exemption for laboratory waste by setting up its laboratory facilities in dormitories.

2. A university provides a workroom within a dormitory or other housing facility for students to complete homework assignments, including art and modeling projects. The workroom is equipped with a sink and collection containers for wastes generated from student projects. The university provides these collection containers as a good management practice to promote proper handling of these wastes. Periodically, these collection containers are brought to one of the university's hazardous waste storage areas. Is the waste collected in the workroom exempt from RCRA regulation under the household waste exemption? Can the university bring this waste to one of its waste storage areas as a generator without being classified as a treatment, storage, and disposal facility (TSDF)?

CONCURRENCES

| SYMBOL | CHW | SEL | CHW | OPC | CHW | CHW | | |
|---------|-----------|---------|---------|---------|----------|----------|--|--|
| SURNAME | Hsieh | Rota KB | 9468 | Funk | Cooper | Quentin | | |
| DATE | 12/7/2001 | 12/7/01 | 12/7/01 | 12/7/01 | 12/11/01 | 12/11/01 | | |

Mr. Edward W. Pickering
Page 2

Response: In general, EPA also would consider wastes from student art and modeling homework assignments generated in this manner to be exempt under the household hazardous waste exemption. Again, the exception would be if homework assignments were given for the purpose of avoiding regulation.

A university will not become a TSDF under the federal regulations simply by bringing exempt HHW from a dormitory to one of its hazardous waste storage areas. Rather, the HHW will become subject to regulation as a newly generated hazardous waste when it is commingled in the hazardous waste storage area with other non-exempt hazardous waste. All of the wastes in such a central storage area should then be stored and ultimately disposed in accordance with all applicable hazardous waste requirements.

Finally, you should consult with each State in which a university is located. Each State may have more stringent requirements, or a more stringent interpretation of the above requirements.

I hope the above responses address your concerns. If you have any further questions on this letter, please contact ~~my~~ Hazardous Waste Unit (Jui-Yu Hsieh at 617-918-1646 or Stephen Yee at 617-918-1197). *in the the other either*

Sincerely,

Marv Rosenstein, Chief
Chemical Management Branch

Office of Ecosystem Protection

cc: Ken Rota, EPA, OES

Gary Gosbee, EPA, OEP

Jeffrey Fowley, EPA, ORC

Laurie Grandchamp, RI DEM

Stacy Ladner, ME DEP

Peter Marshall VT DEC

Bill Sirull MA DEP

John Duclos NH DES

Dave Sattler CT DEP



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

December 11, 2001

Mr. Edward W. Pickering
Environmental Science Services, Inc.
272 West Exchange Street, Suite 101,
Providence, Rhode Island 02903

Re: Applicability of Household Hazardous Waste Exemption in University Dormitories.

Dear Mr. Pickering:

Thank you for your letter of June 19, 2001 to Mr. Ken Rota requesting clarification of the applicability of the exemption for household hazardous waste (HHW) in 40 CFR 261.4(b)(1). Specifically, you asked whether this exemption applies to certain wastes generated in dormitories and other housing facilities owned and operated by colleges and universities?

The following are the two scenarios that you described in your letter, and our responses.

1. A student completes homework assignments in his/her private room in a dormitory or other housing facility. Some assignments, such as art and modeling projects, result in generation of spent solvents, paints and other wastes that would meet the definition of listed hazardous waste and/or characteristic hazardous wastes. Are these wastes exempt under the household waste exemption?

Response: In order for a waste to meet the HHW exemption, it has to meet two criteria, the waste must be generated by individuals on the premises of a temporary or permanent residence, and be composed primarily of materials found in the wastes generated by consumers in their homes. (49 FR 44978; November 13, 1984). In general, EPA would consider wastes from student art and modeling homework assignments generated in this manner to be exempt under the household hazardous waste exemption. The exception would be if homework assignments were given for the purpose of avoiding regulation. For example, a university could not claim the HHW exemption for laboratory waste by setting up its laboratory facilities in dormitories.

2. A university provides a workroom within a dormitory or other housing facility for students to complete homework assignments, including art and modeling projects. The workroom is equipped with a sink and collection containers for wastes generated from student projects. The university provides these collection containers as a good management practice to promote proper handling of these wastes. Periodically, these collection containers are brought to one of the university's hazardous waste storage areas. Is the waste collected in the workroom exempt from RCRA regulation under the household waste exemption? Can the university bring this waste to one of its waste storage areas as a generator without being classified as a treatment, storage, and disposal facility (TSDF)?

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Mr. Edward W. Pickering
Page 2

Response: In general, EPA also would consider wastes from student art and modeling homework assignments generated in this manner to be exempt under the household hazardous waste exemption. Again, the exception would be if homework assignments were given for the purpose of avoiding regulation.

A university will not become a TSDF under the federal regulations simply by bringing exempt HHW from a dormitory to one of its hazardous waste storage areas. Rather, the HHW will become subject to regulation as a newly generated hazardous waste when it is commingled in the hazardous waste storage area with other non-exempt hazardous waste. All of the wastes in such a central storage area should then be stored and ultimately disposed in accordance with all applicable hazardous waste requirements.

Finally, you should consult with each State in which a university is located. Each State may have more stringent requirements, or a more stringent interpretation of the above requirements.

I hope the above responses address your concerns. If you have any further questions on this letter, please contact either Jui-Yu Hsieh or Stephen Yee of the Hazardous Waste Unit at 617-918-1646 or 617-918-1197, respectively.

Sincerely,



Marv Rosenstein, Chief
Chemical Management Branch
Office of Ecosystem Protection

cc: Ken Rota, EPA, OES
Gary Gosbee, EPA, OEP
Jeffrey Fowley, EPA, ORC
Laurie Grandchamp, RI DEM
Stacy Ladner, ME DEP
Peter Marshall VT DEC
Bill Sirull MA DEP
John Duclos NH DES
Dave Sattler CT DEP

182

June 19, 2001

Mr. Ken Rota
EPA New England, Region 1
1 Congress Street, Suite 1100 (SER)
Boston, Massachusetts 02114-2023

Re: Household Hazardous Waste

Dear Mr. Rota:

I am writing to request clarification on the applicability of the exemption for household hazardous wastes in 40 CFR 261.4(b)(1).

Specifically, does this exemption apply to wastes generated in dormitories and other housing facilities owned and operated by colleges and universities? The answer to this question impacts several of our New England clients. Our research to date (gained from RCRA Hotline staff and certain state agencies) indicates that dormitory wastes are generally interpreted to meet the definition of household hazardous waste, and therefore are exempt from the hazardous waste regulations. I would like written confirmation from the EPA of this interpretation to ensure that these wastes are being correctly classified.

I have included specific details of scenarios I have encountered:

- A student completes homework assignments in his/her private room in a dormitory or other housing facility. Some assignments, such as art and modeling projects, result in generation of spent solvents, paints, and other wastes that would meet the definition of listed hazardous waste and/or characteristic hazardous wastes. Are these wastes exempt under the household waste exemption?
- A university provides a workroom within a dormitory or other housing facility for students to complete homework assignments, including art and modeling projects. The workroom is equipped with a sink and collection containers for wastes generated from student projects. The university provides these collection containers as a good management practice to promote proper handling of these wastes. Periodically, these collection containers are brought to one of the university's hazardous waste storage areas. Is the waste collected in the workroom exempt from RCRA regulation under the household waste exemption? Can the university bring this waste to one of its waste storage areas as a generator without being classified as a treatment, storage, and disposal facility (TDSF)?

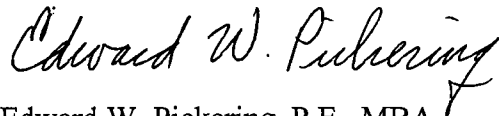


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If you require any clarification on my questions or would like to discuss them further prior to preparing your written response, please call me at (781) 431-0500, Extension 141. I appreciate your assistance.

Sincerely,

ENVIRONMENTAL SCIENCE SERVICES, INC.



Edward W. Pickering, P.E., MBA
Senior Project Manager



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

11/2

JUN 12 2001

David Nash, Director
Connecticut DEP
Waste Engineering and Enforcement Division
Bureau of Waste Management
79 Elm Street
Hartford, CT 06106-5127

Dear Mr. Nash:

This letter responds to your March 14, 2001 letter requesting EPA New-England's interpretation of the regulatory status of a container (55-gallon drum) that is connected to a cyclone dust collector for the purpose of accumulating waste solids removed by this device. The source of this waste, according to CT DEP, is a deburring operation that is ducted from the cyclone unit. The CT DEP has requested that EPA determine whether the container, used to collect solids removed by the cyclone, is subject to the container management regulations of 40 CFR 262.34(a)(3) and/or 262.34(c)(1), or whether this container is exempt under 40 CFR 261.4(c) on the basis that this container is an "integral" part of the manufacturing unit.

EPA has reviewed the information submitted by the CT DEP and determined that the 55-gallon container attached to the cyclone unit is subject to the container management requirements as outlined under 262.34. CT DEP provided copies of two EPA interpretative letters (Faxback 14200 and Faxback 11921) as part of this interpretation request. Faxback 14200 contained an interpretation of the term "integral" component as it applied to the status of a silo system directly connected to a cyclone unit. The interpretative letter is not determinative of this matter and addressed the "unique situation" of fixed silos constructed as parts of dust handling systems. In general, EPA has not exempted baghouse dust or other sludge from RCRA requirements once it is removed from an air pollution control device. Faxback 11921 addressed the issue of whether dusts were considered solid wastes prior to collection in a baghouse or electrostatic precipitator, two types of air pollution control units. Faxback 11921 states that RCRA applicability determinations generally would be made once the material is removed from the baghouse.

EPA's determination of the regulatory status of the 55-gallon container considered several facts. First, the 55-gallon container is neither a manufactured item that is provided by the vendor as a fixed component to the cyclone unit nor is it an item that is otherwise required to ensure the proper operation of the cyclone unit. A cyclone is designed to both remove and store particulate matter from an air emission source. The 55-gallon container is not necessary and only facilitates the eventual transfer and removal of the wastes already separated and collected by the unit. As such, the storage of waste within the cyclone is not immediately regulated since this device is part of a manufacturing unit. However, the initial point of regulation occurs when these dusts exit the conical end of the cyclone device for storage in the 55-gallon container since the dust has exited the manufacturing unit in which it was initially generated (See 40 C.F.R. 261.4(c)). The 55-gallon container is also the same container that is ultimately shipped off-site to a permitted Treatment, Storage or Disposal facility as evidenced by the removal of the container once 55-gallons of waste has been accumulated. This fact is not a critical element, however, since the drum would be subject to the RCRA requirements upon first receipt of the dusts, regardless.

The regulation of the 55-gallon container as either a satellite or less-than-ninety day container does not represent any new or significant change in EPA's position in this matter. The status of

David Nash
Page 2

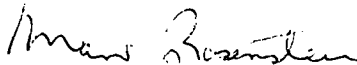
JUN 12 2001

the 55-gallon container is consistent and similar with how EPA regulates roll-off boxes, gaylords or other types of containers used to collect sludges generated from pollution control devices such as wastewater treatment systems. In those instances, the treatment portion of those systems, the tank related portions of those systems and any conveyances associated with those systems are exempt under the wastewater treatment exemption. However, any container used to accumulate such wastes, as is the case in your example, is not exempt under the current RCRA regulations.

The regulated status of the 55-gallon container described above is also consistent to other similar situations where the use of containers to collect hazardous wastes, while necessary, is not considered "integral." An example of this is the use of a container to collect waste discharges produced by the operation of analytical equipment. In those situations, the failure to use any type of container to collect the waste generated by the analytical equipment would result in an uncontrolled release of a hazardous waste. The use of a container to collect hazardous waste discharges, while essential to prevent spillage, are not "integral" to the process and, therefore, is subject to full regulation. We have recently observed that some manufacturers of analytical equipment have redesigned their equipment to incorporate these containers as a fixed component with added safety features to ensure that the analytical equipment can not operate if the container is full or not properly attached to the unit. We have considered those containers to be "integral" under those circumstances. For the scenario you describe above, however, the cyclone unit is both a treatment and initial storage device so that any container then used to collect dusts from the unit would not be "integral" to the process.

If you have any questions concerning this matter, please call Kenneth Rota at (617) 918-1751 or Sharon Leitch at (617) 918-1647.

Sincerely,



Marvin Rosenstein, Chief
Chemicals Management Branch
EPA-New England

cc: Ken Rota, Chief, RCRA Technical Unit
Gary Gosbee, Chief, Hazardous Waste Unit
Jeff Fowley, Atty., Office of Regional Council



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

1037

June 7, 2001

Mr. Ken Chin
Central Artery/Tunnel Project
185 Kneeland St.
Boston, MA 02111

re: Central Artery/Tunnel (CA/T) Project
Applicability of Land Disposal Restrictions (LDRs) to De-characterized Toxicity
Characteristic (TC) Soil

Dear Mr. Chin:

This letter is in response to a letter of transmittal from your office which was addressed to Ken Rota, Chief of the RCRA Enforcement Unit at EPA Region 1 on April 11, 2001. The purpose of the transmittal letter was to request confirmation from EPA Region 1 that the interpretations contained in an attached letter from Camp Dresser & McKee (CDM), Inc. to yourself, dated April 10, 2001, regarding the handling of lead contaminated soil at the Central Artery/Tunnel Project (the "Project"), are accurate. Specifically, whether LDRs would apply to soil that is treated "in-situ" and "ex-situ".

The current practice at the Project has been to apply the MAECTITE treatment process to soil that is hazardous for the characteristic of lead in order to "decharacterize" the soil. This treatment is performed "ex-situ", and, as a result, RCRA generator and LDR requirements apply. The Project is currently seeking approval from the MADEP to perform treatment of the soil "in-situ". During this process questions have arisen regarding the applicability of the RCRA regulations to in-situ treatment. As is noted in the April 10 letter, EPA Region 1 issued an interpretation regarding the applicability of RCRA to soils treated "in-situ" and "ex-situ" in a letter dated December 22, 1997, to Peter M. Zuk of the CA/T Project. EPA's position has not changed since that time: if a hazardous waste is not generated, as when soil is treated in-situ within an area of contamination ("AOC"), then LDRs do not apply. However, when a hazardous waste is generated by excavation of soil with a hazardous characteristic which is then treated ex-situ, LDRs do apply.

Ken Chin
Page 2
June 7, 2001

One scenario where LDRs would not apply would be where a corrective action management unit (CAMU) is created for the treatment, storage or disposal of remediation waste. EPA has developed particular RCRA requirements to encourage management of remediation waste under the CAMU rule (see 40 CFR §264.552). However, the rule would only apply to a site where the remediation waste, in this case treated soil, is placed in a CAMU which would be subject to site specific disposal controls. This approach does not appear to be applicable to the Project.

One point that is mentioned in the CDM letter which was not addressed in the December 22, 1997 EPA letter is that when additional treatment to achieve universal treatment standards (UTS) is necessary, for soil which was treated ex-situ, that the additional treatment may be performed outside of the area of contamination (AOC), but must be completed prior to the soil's final off-site disposal or reuse. Please note that this additional treatment if performed outside of the initial site of generation can only be done under the requirements of a RCRA permit. The treatment that is performed "ex-situ" in tanks and containers but within the AOC is considered by EPA to be treatment being done by a generator in tanks and containers at the initial site of generation, and, therefore, would not require a permit. However, any additional treatment that may be required, i.e. to meet LDRs, would need to occur at a permitted treatment, storage or disposal facility (TSDF).

The CA/T project may want to consider making a hazardous waste determination of any excavated soil prior to performing treatment ex-situ to determine the actual regulatory status of the soil. For a situation where it is determined that the soil is not a hazardous waste, initial treatment would not be necessary and LDRs would not apply since a hazardous waste has not been generated. However, if a determination is not made and it is assumed that all soil being treated ex-situ is hazardous, LDRs would apply.

Please note that individual state regulations may be both more stringent and broader in scope than the EPA regulations. Since Massachusetts is authorized for the base RCRA program, which includes hazardous waste determinations, generator and permitting requirements, you should contact the State regarding its views on the above issue.

Ken Chin
Page 3
June 7, 2001

If you have any questions regarding this letter please contact Sharon Leitch of the Hazardous Waste Unit at (617)918-1647.

Sincerely,

A handwritten signature in black ink, appearing to read "Marvin Rosenstein".

Marvin Rosenstein, Chief
Chemicals Management Branch

cc: G. Gosbee, Chief, Hazardous Waste Unit, EPA
K. Rota, Chief RCRA Enforcement Unit, EPA
J. Fowley, Atty., ORC-EPA
J. Carrigan, Compliance Assessment Branch, MADEP

**Central Artery/Tunnel**

185 Kneeland Street
Boston, Massachusetts 02111
Telephone: (617) 951-6000

**LETTER OF
TRANSMITTAL**

DATE: 11-APR-2001
COMM NO.: T-2001-00623L
FILE NO(S): EN-9.3.87
CL-1.2

TO: Ken Rota, mail code SER
Chief of RCRA Enforcement Unit
US Environmental Protection Agency
One Congress Street
Boston, MA 02203

KEYFILE NO. -
RE: In-situ De-characterization of TCLP-Lead Soil

ATTENTION:

WE ARE SENDING YOU ☐ ATTACHED ☐ UNDER SEPARATE COVER VIA _____ THE FOLLOWING ITEMS:
☐ REPORTS ☐ PRINTS ☐ PLANS ☐ SAMPLES ☐ SPECIFICATIONS
☒ COPY OF LETTERS ☐ CHANGE ORDER ☐ OTHER: _____

| COPIES | DATE | NO. | DESCRIPTION |
|----------|--------------------|-----|--|
| <u>1</u> | <u>10-APR-2001</u> | | <u>Letter, LO-CAT-01-26G-0221, from Camp Dresser & McKee, Inc.</u> |
| | | | <u>to Ken Chin of Bechtel/Parsons Brinckerhoff</u> |
| | | | <u>Subject: In-situ De-characterization of TCLP-Lead Soil</u> |
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☐ AS REQUESTED ☐ RETURNED FOR CORRECTIONS ☐ RETURN _____ CORRECTED PRINTS
☐ FOR REVIEW AND COMMENT ☐ PRINTS RETURNED AFTER LOAN TO US
☐ FOR YOUR SIGNATURE
☐ FOR BIDS DUE _____

REMARKS:

Enclosed please find the above letter prepared by Camp Dresser & McKee, Inc. (CDM) requesting confirmation from EPA Region I regarding applicability of Land Ban Restriction on soil that has been de-characterized using an in-situ treatment process. If you have any questions on this matter, please call Ken Chin at (617) 951-6486.

CC: Steve Lipman, MADEP

COPY TO:

IF ENCLOSURE(S) ARE NOT AS NOTED, PLEASE
NOTIFY US IMMEDIATELY.

AD117 (8/99) ORACLE (10/99) KSCHIN WPD

CENTRAL ARTERY/TUNNEL PROJECT

TRANSMITTED BY: Paul Stakutis

Paul Stakutis
SIGNATURE

CDM Camp Dresser & McKee Inc.

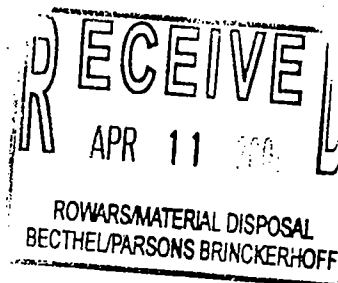
consulting
engineering
construction
operations

One Cambridge Place
50 Hampshire Street
Cambridge, Massachusetts 02139
Tel: 617 452-6000 Fax: 617 452-8000

April 10, 2001

LO-CAT-01-26G-0221

Mr. Ken Chin
Authorized Representative
CA/T Project
Bechtel/Parsons Brinckerhoff
185 Kneeland Street
Boston, MA 02111



Subject: Central Artery (I-93)/Tunnel (I-90) Project
Contract 97159-M026G
Construction Contract C25A4 - In situ De-characterization of TCLP-Lead Soil

Dear Mr. Chin:

For several years, the CA/T Project has been using the MAECTITE treatment process to de-characterize TCLP-lead soil prior to off-site disposal. To date, the treatment has all been performed ex situ by application of the treatment solution to the excavated soil as it is placed into lined truck beds or roll-off containers. There is currently a plan to also conduct the treatment in situ subject to MDEP approval, and an in situ pilot test needed to obtain that approval was recently proposed in CDM letter LO-CAT-01-26G-0210.

During the recent discussions regarding the proposed in situ application of the de-characterization process, some questions have been raised regarding regulatory differences pertaining to the ex situ and the in situ approaches. Based on our understanding of the applicable RCRA regulations, as well as information presented in the December 22, 1997 EPA Region I letter (copy attached) regarding the on-site de-characterization process, we believe the basic regulatory difference is as follows:

- Ex situ treatment - Because the soil when initially excavated is untreated, a RCRA characteristic hazardous waste is generated when the soil is removed from the ground. As a result, all applicable RCRA generator requirements and land disposal restrictions (LDRs) apply. The LDRs include requirements to achieve the universal treatment standards (UTS) for all underlying hazardous constituents (UHCs) prior to final off-site disposal or reuse of the soil. Additional treatment to achieve the UTS for all UHCs above the applicable standards may be performed outside the area of contamination (AOC), but must be completed prior to the soil's final off-site disposal or reuse.
- In situ treatment - Because the TCLP-lead characteristic is eliminated prior to excavation of the soil, RCRA hazardous waste is never generated in this approach. The soil is removed from the ground. The material when excavated is not a characteristic hazardous waste, and RCRA generator and LDR requirements do not apply.

Mr. Ken Chin

April 10, 2001

Page 2

do not apply. As such, there are no requirements to remove the excavated soil from the site within the 90 day storage limit nor to treat any UHCs that may be present to meet the UTS prior to off-site disposal or reuse. The excavated material must only meet the permit requirements of the selected off-site disposal facility.

This distinction between the two approaches regarding the applicability of the LDRs has potentially significant cost ramifications for final material disposal at an off-site location. For example, there have been several instances to date when, following ex situ de-characterization, the concentrations of individual polycyclic aromatic hydrocarbon (PAH) compounds have required additional off-site thermal treatment of the soil in order to meet UTS prior to final disposal. In addition to the increased costs for the additional treatment, this has limited the selection of potential off-site facilities to receive the soil following de-characterization to only those facilities that can provide the required additional treatment. Had the UTS not been applicable, the PAH concentrations would have been within the permit limits for direct off-site disposal at a much wider selection of facilities without additional treatment.

Because of the significant cost impacts to the CA/T Project associated with the above noted regulatory interpretation, we recommend that a copy of this letter be forwarded to the attention of Mr. Ken Rota at EPA Region I with a request for EPA's confirmation that the interpretation is accurate.

Please contact us if you want to discuss this matter further, or require additional information.


Very truly yours,

CAMP DRESSER & MCKEE INC.



Richard G. Christian, P.E.
Associate
Deputy Project Director

APPROVED BY:



Bruce R. Conklin, P.E.
Vice President
Project Director

Enclosure

cc: A. Sewall
W. Swanson



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001**

December 22, 1997

Peter M. Zuk, Project Director
Massachusetts Highway Department
Central Artery/Tunnel
One South Station
Boston, MA 02110

re: Central Artery/Tunnel (CA/T) Project
Proposed Treatment Process for Toxicity Characteristic (TC) Soil

Dear Mr. Zuk:

The Hazardous Waste Program Unit of EPA-New England is in receipt of your letter dated December 1, 1997, in which you inform EPA of your intention to implement a process to remove and treat TC-lead contaminated soil from the CA/T Project on a project-wide basis. Implementation of the process is based upon the results of pilot studies performed on 250 cubic yards of TC-lead excavate which successfully demonstrated that all of the TC-lead levels were reduced to levels well below the regulatory limit of 5.0 mg/l. In that letter you state that you intend to treat lead-contaminated soil by applying and mixing a liquid reagent with the TC-soil in order to reduce the leachability of metals by crystal mineralization.

As indicated above, the soil contains lead which may be found at levels that would define it as a hazardous Toxicity Characteristic (TC) waste. The TC rule was promulgated by EPA under the authority of the Hazardous and Solid Waste Amendments (HSWA) and therefore is implemented by EPA in all states until such time that the states become authorized for the rule. The Commonwealth of Massachusetts will be seeking authorization for the TC rule during 1998. The implications of this on your situation would be that if the process is deemed to need a RCRA Part B permit because of the TCLP test, EPA would be the permit issuing authority in states that do not have TC authorization.



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Peter M. Zuk
Page 2
December 22, 1997

In your correspondence two general treatment scenarios are proposed to implement the previously defined treatment process. These scenarios have been interpreted by the environmental consultants to the CA/T project as being exempt from the RCRA permitting process. The scenarios are as follows: Scenario 1- "Treatment of Confirmed TC-Soil In Situ" proposes to apply the liquid reagent to in-situ soil that exceeds or potentially exceeds the regulatory limit for TC-lead. The reagent will be applied to treat the soil in lifts of 18" to 24" deep. As indicated in the letter, the treatment process occurs almost instantaneously upon application of the reagent and, therefore, when the treated soil is excavated it is no longer considered a RCRA hazardous waste. This treatment scenario, as indicated above, is considered to not need a RCRA permit. EPA agrees with this interpretation since no hazardous waste is being generated under this scenario. Additionally, as indicated in the letter the handling and storage of any treated stockpiled-soil will be done in accordance with the November 1993 Compliance Plan approved by DEP within the AOC ("area of contamination"); Scenario 2- "Treatment of TC-Soil in Tanks and/or Containers" proposes to treat the excavated TC-soil within the identified AOC by applying the reagent to the soil as it is being placed in watertight containers. The treated soil will be stored in the same manner as indicated under Scenario 1. As mentioned previously, this treatment scenario as proposed is considered not to need a RCRA permit. EPA, again, agrees with this interpretation, assuming that the requirements discussed below are met. However, since a hazardous waste is being generated certain generator requirements must in any event be met.

The exclusion from permitting which may apply to your process is found in 40 CFR § 264.1, which states that the requirements of Part 264 - Standards for owners and operators of hazardous waste TSDFs, do not apply to:

A generator accumulating waste on-site in compliance with 40 CFR § 262.34. In connection with such accumulation, the EPA also has determined that permits are not required for generators treating their hazardous wastes in the generators' tanks or containers in conformance with the requirements of § 262.34 and Subparts I or J of Part 265. See 51 Fed. Reg. at 10168 (March 24, 1986), and 40 C.F.R. § 268.7(a)(4).

In order to qualify for this exemption from the permitting requirement, the waste must be treated by the generator and stored for no more than 90 days. In addition, the waste must be treated within tanks or containers as defined in 40 C.F.R. § 260.10. Finally, all parts of your system involved in storing and treating the waste must meet the requirements of 40 C.F.R. § 262.34 and 40 C.F.R. Part 265, Subparts I or J, and

Peter M. Zuk
Page 3
December 22, 1997

Subparts AA, BB, and CC. In order to be excluded from the permitting requirement, you need to ensure that all of these requirements are met.

Assuming that you do qualify for the exemption from permitting, you must still meet all applicable generator requirements. In removing any soil which is a hazardous waste, you are considered to be generating a hazardous waste, even if it is then rendered non-hazardous by your treatment. The applicable requirements include obtaining an EPA ID number as the generator of a hazardous waste. 40 C.F.R. § 262.12.

In addition, while the treated soil will be non-hazardous if it does not fail the Toxicity Characteristic, it still must meet all applicable land disposal restrictions (LDR). The current LDR treatment standard for lead for this type of waste is 5.0 mg/l TCLP. As a generator treating wastes subject to LDR, you also will be required to develop and follow a written waste analysis plan pursuant to 40 C.F.R. § 268.7(a)(4).

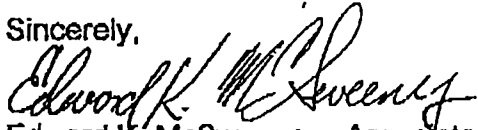
Although an EPA permit will not be required for the treatment process if you meet the requirements stated above, you are reminded that individual state regulations may be both more stringent and broader in scope than the EPA regulations. Therefore, you will need to contact the state for a determination regarding its views on the regulatory status of the treatment process. Since Massachusetts is authorized for the base RCRA program, which includes sections 261, 262, and 264 of 40 CFR, it maintains the authority to make more stringent determinations regarding exclusions.

In summary we believe for reasons previously discussed that an EPA hazardous waste permit will not be required for the above activity under Scenario 2 if you meet the requirements discussed above. However, the Massachusetts Highway Department will be subject to federal generator requirements, including LDR requirements, and also should contact the MADEP to determine if there are provisions that are more stringent or broader in scope than EPA's.

Peter M. Zuk
Page 4
December 22, 1997

If you have any questions regarding this or any other issue, please do not hesitate to contact Gary Gosbee, Chief, Hazardous Waste Program Unit at (617) 565-3725. You may also contact Sharon Leitch, of his staff, at (617) 565-4879.

Sincerely,



Edward K. McSweeney, Associate Director
Waste Policy

cc: G. Gosbee, Chief, Hazardous Waste Program Unit, EPA
K. Rota, Acting Chief RCRA Enforcement Unit, EPA
J. Fowley, Atty., ORC-EPA
J. Miller, Chief, Waste Branch, MADEP
J. Carrigan, Compliance Assessment Branch, MADEP
J. Duclos, Supervisor, Hazardous Waste Compliance Section, NHDES
D. Sattler, Supervisor, WEED, CTDEP
L. Hellested, Supervising Engineer, RIDEM
S. Ladner, Supervisor, Bureau of Remediation & Waste Management, MEDEP
P. Marshall, Chief, Hazardous Materials Management Division, VTDEC



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Sory - who should this be assigned to?

March 14, 2001

Mmm

United States Environmental Protection Agency
Region 1
John F. Kennedy Federal Building
Boston, MA 02203-0001
Attn: Marv Rosenstein

Re: **Regulatory interpretation on containers connected to dust collection devices.**

Dear Mr. Rosenstein:

In the past, EPA Region I has offered it's assistance with certain regulatory interpretations that would be beneficial for the entire region as opposed to one particular state. It is for this reason that Connecticut DEP is forwarding this request for regulatory interpretation to you, in an effort to ensure consistency on this issue throughout New England.

The question is whether or not a container (55-gallon drum) connected to the bottom of a cyclone dust collector, collecting hazardous waste solids generated from deburring operations, is subject to regulation under 40 CFR 262.34(a)(3) or 262.34(c)(1), or is exempt from regulation under 40 CFR 261.4(c). Specifically, the dust generated at seven deburring stations is down-drafted via duct pipes to a cyclone dust collector. In the device, particulates are removed from the air and collected in a 55-gallon drum connected to the bottom of the device. Once filled, the drum is disconnected from the dust collector, marked "Hazardous Waste" and moved to a designated hazardous waste storage area. The dust is disposed as F002, F003, F005, D006 and D007 hazardous waste. The generator claims that the drum, while connected to the dust collector and being filled with this waste, is exempt from RCRA regulation under 40 CFR 261.4(c). As a result, while the drum is connected to the dust collector, the generator does not mark it with the words "Hazardous Waste" and other words identifying the contents. The basis of the generator's claim is that: 1) the container is an integral part of the process (i.e. helps prevent leakage), and 2) the waste is not removed from the process until the drum is disconnected from the dust collector.

Enclosed is a copy of the package of material dated November 8, 2000 sent to the DEP by Sikorsky Aircraft Corporation (the generator described above). Included in the package are: 1) EPA Faxback 11921 from U.S. EPA to James A. Lively, dated October 19, 1995 and 2) EPA Faxback 14200 from U.S. EPA to William Guerrey, dated June 1, 1998. Sikorsky maintains that these two EPA documents help support their claim.

DEP is requesting EPA's interpretation on Sikorsky's submittal so that DEP may more accurately be able to assess their claim for an exemption from certain RCRA regulations,

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Jeff Kowalsky
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Matt
Hagland*

*all
original
to
Sory
Dorbin*

*Nov 2
3/22*

and be consistent with other Region I states. If you have any questions regarding this request, please contact Paul Hassler of my staff at (860) 424-3284.

Sincerely,

A handwritten signature in black ink, appearing to read "D. A. Nash", written in a cursive style.

David A. Nash, Director
Waste Engineering and Enforcement Division
Bureau of Waste Management

DAN/ph
Enc.

cc. Jim Gaffey, U.S. Environmental Protection Agency

Sikorsky Aircraft Corporation
6900 Main Street • P.O. Box 9729
Stratford, Connecticut 06615-9129
(203) 386-4000



Sikorsky

A United Technologies Company

November 8, 2000

Mr. Paul Hassler, Environmental Analyst
Engineering and Enforcement Division
Bureau of Waste Management
Department of Environmental Protection
79 Elm Street, Hartford, CT 06106 - 5127

SENT BY CERTIFIED MAIL

Re: Notice of Violation # HM-1114
6900 Main Street, Stratford, CT

Dear Mr. Hassler:

This document is submitted in response to the Notice of Violation, received October 16, 2000 concerning two observations during the July 12, 17 and 18 inspection:

1. Identify the contents of a satellite accumulation container as required by Section 22a-449(c)-102(a)(2)(C) of the Regulation of Connecticut State Agencies incorporating 40 CFR 262.34(a)(3).

Referring to page 11a of the DEP inspection report dated 9/12/00:

One 55-gallon drum was marked "Hazardous Waste" and dated 5/17/00, but lacked a description of contents. Instead it was marked "dept. #527" and in the section designated for Sikorsky's waste stream number, "To Be Determined." Prior to completion of this inspection, the contacts showed me a Sikorsky internal memo from Linda Barlow to Kevin Broderick dated 7/14/00, entitled "Stream for Drum of Quad II NB at Drum Building."

Section 22a-449(c)102(a)(2)(C) requires that in addition to the words, "Hazardous Waste," containers shall be marked with other words that identify the contents of the container.

The container was a raw material used in boiler treatment and it was determined to be obsolete. The original raw material label was intact on the container. This label identified the raw material name, Quad II NB, and the name, address and telephone number of the manufacturer. This information was used to obtain a copy of the Material Safety Data Sheet and to complete the waste determination. The waste was assigned waste stream number 029200 and it was

shipped off-site for treatment and disposal on August 4, 2000. Copies of Linda Barlow's internal memo, her handwritten notes taken from the label, and the Material Safety Data Sheet are contained in Appendix 1.

Sikorsky maintains that the original product label on the container satisfied the Connecticut requirement to describe the waste material. To further assure there is no mix-up concerning the identification of waste, Sikorsky will instruct personnel to record the raw material trade name directly on the hazardous waste label.

2. Mark seven containers with the words, "Hazardous Waste" and identify their contents as required by Section 22a-449(c)-102(a)(2)(C) of the Regulation of Connecticut State Agencies incorporating 40 CFR 262.34(a)(3).

Page 3a(E) of the DEP inspection report, dated 9/12/00, states:

Solids drop to a 55-gallon drum attached to the bottom of the dust collector. The drum is sealed to the dust collector via a flexible duct. On the side of the drum were the remains of a hazardous waste marker that had been scratched off. This waste stream (Sikorsky stream # 027052) is disposed as F002, F003, F005, D006 and D007 hazardous waste..... The contacts stated that the marker was removed because they no longer regarded the drum as a container subject to 40 CFR Part 265, Subpart I, but rather as an integral part of the dust collection system, exempt from regulation in accordance with 40 CFR 261.4(c). They stated that because the drum is connected to the dust collector and the unit cannot function properly without this drum (e.g. the unit would lose air-flow velocity and/or spill dust on the floor), it is all one piece of equipment. The contacts could not produce any EPA or DEP documents to support this regulatory interpretation. The contacts stated that once it becomes full and is removed from the dust collector to the hazardous waste storage building, the drum is marked "hazardous waste" and managed as a waste container. This is one of approximately seven dust collectors located throughout the facility that are managed similarly, each of which generates hazardous waste.

The matter expressed in the report concerns the interpretation of 40 CFR 261.4(c) which states:

A hazardous waste which is generated in a.... manufacturing process unit or an associated non-waste-treatment-manufacturing unit, is not subject to regulation..... until it exits the unit in which it was generated....

The key issues we have identified are:

1. When does the material become a waste; and
2. At what point has the waste been removed from the process.

Two documents that address baghouse dust are referenced below; copies of them are provided in Appendix 2:

1. EPA Faxback 11921 from U.S. EPA to Mr. James A. Lively, 10/19/95
2. EPA Faxback 14200 from U.S. EPA to Mr. William M. Guerry, 6/1/98

In the first correspondence, EPA states that in order to evaluate the type of equipment with regard to 261.4(c), it must first be determined at which point the dust residue is considered to become a waste (reference Faxback 11921, paragraph 2).

The Sikorsky process is a metal parts deburring operation. Seven deburring stations are manifolded together so that a downdraft flow of air captures dust and particles from the deburring operation. The air stream passes through a cyclone-type of apparatus so that the particulate settles out and the air is exhausted. The dust is derived from materials that are not wastes. The regulatory status of the materials going into the duct system is that they are inherently part of the deburring process.

The container where the particulate settles is integral to the process. The integrity of the complete deburring operation is intended to prevent leaks. This level of integrity depends upon the direct connection between the deburring station and the dust collector, hoses, funnel and container. The system is designed to be operated in conjunction with the deburring operation. In the second correspondence listed above, EPA writes: "We have stated in the past that 'determining the applicability of RCRA [to baghouse dust] would generally be made when the material is removed from the baghouse.'"

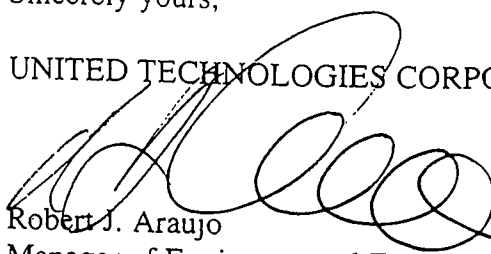
To assure that the waste is properly labeled and managed when it is removed from the dust collection system, Sikorsky has implemented a labeling system for the seven dust collectors described in the inspection report. The equipment has been marked with a label indicating the proper Sikorsky waste stream number for the waste when it is removed from the system. A copy of the label is attached in Appendix 3. This system assures that waste is properly evaluated for hazardous waste characteristics and that it is labeled as RCRA-hazardous or non-hazardous based on the determination after its removal.

Thank you for this opportunity to confirm that all corrective actions have been addressed. We do not believe Sikorsky operations were deficient at the time of the inspection. We apologize for any misunderstandings that occurred during the inspection and that the EPA documents were not provided sooner to avoid issuance of the notice of violation. We would be pleased to sponsor a forum for agency and industrial professionals to explore the interpretation and applicability of 261.4(c).

If you need additional information, please contact Susan Carey, Principal Environmental Engineer, at 203-386-5633 or call me at 203-386-6326.

Sincerely yours,

UNITED TECHNOLOGIES CORPORATION



Robert J. Araujo

Manager of Environmental Engineering
SIKORSKY AIRCRAFT CORPORATION

enclosures

- Attachment 1 Documents that indicate the raw material was labeled at the time of the inspection
- Attachment 2 EPA memorandum concerning interpretation of 40 CFR 261.4(c)
- Attachment 3 Sikorsky labeling

Attachment 2

**EPA memorandum concerning
interpretation of 40 CFR 261.4(c)**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE
OF
SOLID
WASTE
AND
EMERGE
RESPONS

Date: June 1, 1998

Mr. William M. Guerry, Jr.
Collier, Shannon, Rill & Scott, PLLC
3050 K Street, N. W.
Suite 400
Washington, D.C. 20007

Dear Mr. Guerry,

Thank you for your letter of December 3, 1997 regarding the management of emission control dust from electric arc furnaces (EAFs), and specifically, requesting a regulatory determination under the Resource Conservation and Recovery Act (RCRA) for silos that collect captured emission control dust from baghouses.

As your letter describes, baghouses that are part of EAF emission control equipment filter out metal fumes and other emissions from the furnace as EAF dust. As the emissions are filtered in the baghouse, the EAF dust settles and collects in hoppers located in the lower portion of the baghouse. Your letter describes how some steel mills are now using baghouse silo systems to improve the management of EAF dust. The silo, located adjacent to the baghouse, receives the EAF dust from the baghouse hoppers via piping. The silo serves as a single collection point for the EAF dust and a single discharge point of that dust to trucks or rail cars.

Your letter mentions that states have considered baghouse silos to be either a component of the EAF's dust handling system in compliance with the Clean Air Act (CAA), or a regulated hazardous waste storage unit (e.g., tank). We believe that a baghouse silo that is directly connected via piping to the baghouse, as described in your letter, is an integral part of the EAF emission control system. We believe that baghouse silos fall within the scope of what the CAA regulations define as a "dust handling system" (40 CFR 60.271a).

Dust-handling system means equipment used to handle particulate matter collected by the control device for an electric arc furnace or AOD vessel subject to this subpart. For the purposes of this subpart, the dust-handling system shall consist of the control device dust

hoppers, the dust-conveying equipment, any central dust storage equipment, the dust-treating equipment (e.g., pug mill, pelletizer), dust transfer equipment from storage to truck), and any secondary control devices used with the dust transfer equipment. (emphasis added)

Faxback 14200

In the baghouse-silo system described in your letter, the EAF dust is conveyed from the baghouse device into the silo, from which the dust is then loaded into trucks or rail cars for

transport. As you pointed out, fugitive emissions from the dust handling equipment are subject

to CAA requirements. We have stated in the past that "determining the applicability of RCRA

[to baghouse dust] would generally be made when the material is removed from the baghouse"

(letter from Kidwell to Lively, October 19, 1995; permit policy compendium no. 9441.1995(33)).

Because of the unique situation you described, where enclosed silos are integral to the baghouse

dust handling system, we believe that it is reasonable that the applicability of RCRA be determined when the material is removed from the silo. Thus, the silo in this case serves as part

of the dust handling system, and would not be subject to RCRA, with the understanding, based

on your letter, that the purpose of the overall system is dust collection and conveyance, and that

the silo contains the EAF dust, which is hard-piped from the baghouse, protecting it from environmental impacts such as precipitation, so that there are no releases from the silo to soils or

groundwater. EPA would have to analyze separately any baghouse-silo arrangement that did not

match the description in your letter to determine whether the silo would be an integral part of the

dust handling system and, therefore, not subject to RCRA regulation. In addition, any long term

storage would indicate that the silos are not functioning simply as part of EAF emission control

systems, but as waste storage units as well, in which case they could be subject to RCRA requirements.

Please note that because RCRA authorized states may have more stringent requirements than the federal program, we suggest that facilities contact their state agency to determine whether any additional requirements apply. Should you have any questions about the contents of this letter, please contact Jeff Games of my staff at (703) 308-8655.

Sincerely,

Elizabeth A.
Cotsworth,

Acting
Director
Office of
Solid Waste

cc: Matt Hale, OSW
Steve Heare, OSW
Dave Bussard, OSW
William Sonntag, Office of Reinvention
Brian Grant, OGC
Al Vervaert, OAQPS
Christopher Oh, OECA

Faxback 11921

9441.1995(33)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

October 19, 1995

James A. Lively
The TDJ Group, Inc.
760-K Industrial Drive
Cary, Illinois 60013

Dear Mr. Lively:

This letter is written to clarify a point regarding the applicability of RCRA to a foundry manufacturing duct system, as discussed in your August 4, 1995 letter summarizing our July 26, 1995 phone conversation. As stated in your letter and in our conversation, site-specific determinations of RCRA applicability are made by the appropriate state regulatory agency.

As you state in your letter, it is correct that, in general, a material is not considered a solid waste until it is collected in a baghouse or electrostatic precipitator. However, for point of clarification, I should note that this assumes that the material in question (e.g., baghouse dust) results from a production unit, i.e., that the baghouse dust is derived from materials that are not themselves wastes. In such a situation, determining the applicability of RCRA would generally be made when the material is removed from the baghouse. However, should the material in the baghouse result from the treatment or other management of a material already determined to be a solid waste, the question of RCRA applicability to the particulate matter will have already been determined because the particulate matter is derived from a solid/hazardous waste and the duct system is, in effect, a part of a waste management process.

Therefore, to correctly ascertain the applicability of RCRA to the process of injecting a chemical additive in a foundry duct system, it is important to know the regulatory status of the materials going into the duct system. While such a distinction has little impact in manufacturing duct systems in general, it may be an important distinction in specific cases. Again, I strongly encourage you to seek a site-specific determination from the state regulatory agency or appropriate EPA Regional office.

Thank you for your interest in making the appropriate regulatory determinations under RCRA. Should you have any questions concerning this response, please feel free to contact me at (202) 260-8551.

Sincerely,

Mitch Kidwell
Environmental Protection
Specialist
Generator and Recycling Branch

Attachment

The TDJ Group, Inc.
760-K Industrial Drive
Cary, Illinois 60013

August 4, 1995

Mitch Kidwell
US EPA OSW, Regulatory Development Division (5304)
401 M Street Southwest
Washington, DC 20460

Dear Mr. Kidwell:

I am writing this letter in response to our phone conversation on the morning of July 26, 1995. First I would like to thank you for your cooperation in discussing the sometimes confusing issue involving the point of generation of a waste in a foundry manufacturing duct system; your input is greatly appreciated. Secondly, I would like to take this opportunity to confirm some of the information that we discussed so that we are clear that the information was not misinterpreted and will not be misrepresented in our future discussions with state agencies. Up front, you were quite clear that appropriate state regulatory bodies should be making their own decisions but that you would be willing to assist them in this capacity if they so desired.

In our discussion, I asked where is the point of generation of a waste in a foundry duct system. Your response was that appropriate state authorities generally do not classify a material as a waste until it is collected in a baghouse or electrostatic precipitator. Further, I inquired about the process of injecting a chemical additive downstream from a gas conditioning tower (cooling tower), but upstream from a baghouse collector. Your opinion was that state authorities might consider the addition of chemical reagents immediately proceeding cooling tower as an action that would not constitute treatment subject to RCRA permit requirements as long as no vents or exit holes were present in the system downstream from the cooling tower.

If we do not receive a response, we will assume that the information herein is correct. If you feel any of the above was incorrectly interpreted during our conversation, please contact us for clarification. Thank you.

Sincerely,

James A. Lively

Attachment 3

Sikorsky labeling



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

May 29, 2001

John Staskiewicz, Environmental Inspector
City of Fall River
Department of Public Health
One Government Center
Fall River, MA 02722

re: Solid Waste Disposal Regulations

Dear Mr. Staskiewicz:

We have prepared this letter in response to your correspondence dated April 17, 2001. It is our understanding that you have questions regarding the disposal of solid waste. In particular, you request EPA policy interpretation regarding the use of alternative cover material at solid waste landfills and the disposal of special waste at these landfills. Additionally, you asked why Massachusetts and Rhode Island have differing regulations regarding the disposal of special waste and the use of alternative cover material.

EPA's role in the regulation of landfills falls under the solid waste provisions (Subtitle D) of the Resource Conservation and Recovery Act (RCRA). The Federal role in Subtitle D was to establish regulatory direction by providing minimum nationwide permitting standards for protection of human health and the environment. The actual planning and implementation of solid waste programs under Subtitle D is a State and local function. Therefore, the use of alternative cover material and the disposal of special wastes at landfills is a State issue. On July 5, 1995, the EPA made the determination that the Massachusetts Subtitle D Municipal Solid Waste Landfill Permitting program met the minimum federal standards referenced earlier. In addition, on February 14, 2000, the EPA made the same determination for the State of Rhode Island. EPA has limited intervention authority related to Subtitle D issues in both States. Under the determination process the States were provided with discretion for alternative approaches which were protective of human health and the environment. As part of that determination, State statutes were required to meet the intent of the federal requirements, which gives them more flexibility when implementing their programs. However, they can also be more stringent. Therefore, States may have differing requirements in their solid waste rules, as appears to be the case between the two states mentioned.

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John Staskiewicz

Page 2

May 29, 2001

If you need further assistance or information regarding this response, please contact Sharon Leitch in the Hazardous Waste Unit in our Office of Ecosystem protection. She may be reached at (617)918-1647.

Sincerely,

A handwritten signature in cursive script, appearing to read "Marvin Rosenstein".

Marvin Rosenstein, Chief
Chemicals Management Branch

cc: Ken Rota, Chief, RCRA Technical Unit
David Webster, Chief, Massachusetts State Unit
Gary Gosbee, Chief, Hazardous Waste Unit
Jeff Fowley, Atty., Office of Regional Council



CITY OF FALL RIVER, MASSACHUSETTS

DEPARTMENT OF PUBLIC HEALTH
OFFICE OF THE BOARD OF HEALTH

April 17, 2001

APR 17 2001

Mr. Marvin Rosenstein
Chief Chemicals Management Branch
EPA Region I
1 Congress Street
Suite 1100 (CPT)
Boston, MA 02114-2023

Dear Mr. Rosenstein:

I spoke with Mr. David Webster by telephone on Wednesday, April 11, 2001. During that conversation we discussed several issues.

The first issue was regarding the scope of work for the clean up of the settling basins at PG&E Brayton Point Station. Mr. Webster indicated that he would try to get me a copy of the consent decree between PG&E and the Conservation Law Foundation.

David referred me to Gary Gosbe for information regarding the second and third issues.

The second issue was to determine EPA policy regarding the use of alternative cover material at solid waste landfills, and the disposal of special waste at these landfills.

The third issue was why Massachusetts and Rhode Island have very different regulations regarding the disposal of special waste and the use of alternate cover material.

I called Gary Gosbe and left a message regarding these issues. I received a call from Sharon Leitch on April 17th. She was responding to my call to Gary Gosbe. We briefly discussed the issues listed above.

cc: Gary
Sharon
Marvin
I guess he
wants a
written
response
May
5/1



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

March 16, 2001

John J. Duclos, Supervisor
Hazardous Waste Compliance Section
Waste Management Division
N.H. Department of Environmental Services
6 Hazen Drive
P.O. Box 95
Concord, N.H. 03302-0095

Re: Request for Regulatory Interpretation Regarding Spent Foundry Sand

Dear Mr. Duclos:

This is in response to your letter dated May 19, 2000 which requests a Regulatory Interpretation from EPA Region I. In that letter, you state that a foundry in New Hampshire is proposing to ship spent sand to the Noranda Mettallurgy, Inc. Horne Smelter in Quebec, Canada, a primary copper smelter. The sand reportedly contains 60% silica, 32% copper and 2,000 ppm total lead. It fails the Toxicity Characteristic Leaching Procedure (TCLP) test for lead. You state that the foundry has supplied documentation to the New Hampshire Department of Environmental Services (NHDES) that the smelter will use the sand as a fluxing agent (in addition to reclaiming the copper), that the use as a fluxing agent has been approved by the Canadian Ministry of the Environment, and that the lead will be vitrified and rendered "unleachable" as a result of the smelting process. You ask whether the sand should be considered a hazardous waste subject to regulation when shipped to this primary copper smelter for both use as a fluxing agent and reclamation of the copper. You further ask whether it would make any difference if the sand instead was shipped to a primary lead smelter or to a secondary copper or lead smelter.

In our opinion, the spent foundry sand would be subject to regulation as a hazardous waste when shipped to the primary copper smelter for reclamation of the copper, even if also used as a fluxing agent. It also would be subject to regulation if shipped to a primary lead smelter or to a secondary copper or lead smelter for reclamation of either copper or lead even if also used as a fluxing agent.

Explanation of Position

Under 40 CFR § 261.2(e)(1)(ii), a secondary material being "used or reused" as an "effective substitute" for a commercial product is exempt from regulation under certain circumstances. However, this exemption does not apply if the material must be reclaimed before being used or reused. The definition of "used or reused" in 40 CFR 261.1(c)(5)(i) states that use/reuse is not

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occurring "if distinct components of the material are recovered as separate end products (as when metals are recovered from metal-containing secondary materials)." As the EPA explained in the RCRA/Superfund/OUST Hotline Monthly Report (May 1992)(copy enclosed), the 40 CFR § 261.2(e)(1)(ii) exemption only applies when materials are functioning as raw materials by being directly used or reused, and "a material that must be reclaimed prior to use (or reuse) as an effective substitute for a commercial product is not being directly used (or reused) and so would not qualify for the exemption."

When components of a hazardous spent material are recovered, the spent material is considered to be "reclaimed" (see 40 CFR § 261.1(c)(4)) and is subject to regulation. 40 CFR § 261.2(c)(3) and Table 1. This is so whether it is a hazardous waste component like lead or a non-hazardous waste component like copper that is being recovered. The EPA regulations state that a material is "reclaimed" if it is "processed to recover a usable product." 40 CFR § 261.1(c)(4). Such processing occurs whether it is a hazardous or a non-hazardous component that is being recovered.

Also, spent materials being reclaimed are regulated whether they are sent to primary or secondary smelters. Spent materials sent to operations such as secondary smelters which engage generally in reclamation clearly are subject to regulation. In adopting its current regulations regarding recycling, the EPA also interpreted its regulations to mean that certain secondary materials including spent materials should be regulated when sent to primary smelters. The EPA rejected the argument that all secondary materials sent to primary smelters for material recovery should not be regulated since such materials would be substitutes for normal raw material feedstock. Rather, the EPA stated, "when a secondary material is to be recovered in an operation different from the one in which it was generated, we believe there is a continuum with secondary materials becoming more waste-like the more the recovery operation differs from the original process, and the more physically removed the recovery operation is from the original process." 50 Fed. Reg. 614, 640 (January 4, 1985).

Finally, we are advised that the EPA Office of Solid Waste (OSW) consistently has taken the position that spent materials which are both reused (e.g., as a fluxing agent) and reclaimed (e.g., for recovery of lead or copper) are subject to regulation. When foundry sand is sent for reclamation, the overall transaction has significant aspects of waste management, even if the sand also is useable as a fluxing agent. This is particularly so when foundry sand is sent to a copper smelter, since this transaction involves using the smelter to treat and dispose of the sand's lead as well as to recover the copper.

We recognize that arguments have been advanced in favor of changing EPA's interpretations so as to exempt from regulation materials which are both reused and reclaimed, or materials sent to primary smelters or materials sent to lead smelters. We believe that discussions of these issues should continue, including through the Definition of Solid Waste network. However, we believe that the past EPA interpretations described above should be adhered to unless and until they are changed at the national level.

Prior Consistent Guidance

By letter dated March 8, 1995 to the American Foundrymen's Society (copy enclosed), OSW determined that spent foundry sand being reclaimed was subject to regulation. OSW currently is reexamining whether spent foundry sand which undergoes only limited processing prior to being reused on site should continue to be subject to regulation. However, nothing in this reexamination calls into question the Agency's longstanding view that spent materials sent off site for reclamation are subject to regulation.

On page 8 of the March 8, 1995 letter, OSW stated that, "there is one circumstance where spent foundry sands are not solid wastes. Spent foundry sand is not a solid waste under RCRA when legitimately used or reused without reclamation as an effective substitute for a commercial product, 40 CFR § 261.2(e)(1)(ii). It is our understanding that some foundry sands are currently being used as a substitute for virgin silica sand as a fluxing agent in primary copper smelter operations in North America." However, as emphasized to this Region by Paul Borst, one of the authors of the letter (with whom this Region has consulted), this exemption was stated as applying only if there was legitimate reuse without reclamation. In contrast, in the situation inquired about in your letter, any reuse will occur along with reclamation.

That the current company's foundry sand is 32% copper and is to be reclaimed also distinguishes this situation from that addressed in this Region's regulatory interpretation to the NHDES dated March 4, 1994, involving foundry sand that contained only 2-5% copper which was not going to be reclaimed. Rather, the situation inquired about is similar to that about which this Region and the NHDES consulted last year, regarding the proposed shipment by the DM Electronics Recycling Corporation (DMC) of CRTs to a smelter for lead reclamation. By letter to DMC dated June 2, 2000, you correctly noted that the CRTs were subject to regulation since they were being sent for reclamation, even if they also were going to be used as a fluxing agent. As explained above, we believe that the same rules that apply when spent CRTs are sent for reclamation of lead should apply when spent foundry sand is sent for reclamation of copper.

Additional Issue

There may be an additional reason why the foundry sand should not be exempt from regulation. Even if the foundry sand was being sent for reuse as a fluxing agent without reclamation, the reuse would have to be shown to be "legitimate" for the section 261.2(e)(ii) exemption to apply. It is not clear that the proposed reuse of the sand as a fluxing agent has been shown to be "legitimate" in accordance with the criteria set out in the April 26, 1989 Memorandum from then OSW Director Sylvia Lowrance (Lowrance Memorandum).

It should be emphasized that the Region is not making any determination on this issue. The Region does not have the company's request in front of us or the State's complete file. Also, the Region has not sought to resolve this issue since, for the reasons explained above, it is our opinion that the foundry sand will be subject to regulation whether or not its proposed use as a

fluxing agent is "legitimate."

However, we note that all of the criteria in the Lowrance Memorandum would need to be considered to determine whether the proposed reuse is "legitimate." In particular, the following issues would need to be addressed. First, the State would need to determine whether the smelter will pay the foundry for the sand or the foundry will need to pay the smelter to take the sand. If the foundry must pay the smelter to take the sand, the foundry would need to address the perceived conflict between classifying the sand as an effective substitute for a product and having to pay the smelter to take the "product." See Lowrance Memorandum, criteria (3). At minimum, the foundry and smelter would need to demonstrate that the smelter would decrease purchases of an equivalent amount of virgin sand when using the foundry sand, i.e., that the foundry sand truly would take the place of another product. See also Lowrance Memorandum, criteria (1). This is a particular concern here since the percentage of silica sand in the company's spent material (60%) is below the percentages typically found in spent foundry sand (80 - 90% range). Second, the foundry would need to address how the spent sand would be handled throughout its life cycle, if exempted from regulation. If the sand was mishandled (e.g., stored on the ground), this would be inconsistent with its claimed status as a valuable product. See Lowrance Memorandum, criteria (5). Finally, the foundry would need to address the "toxics along for the ride" issue raised by the fact that the spent sand differs from virgin silica in that it contains high quantities of lead. See Lowrance Memorandum, criteria (1) and (6). In particular, the foundry and smelter would need to document whether the lead content in the smelter's slag would be significantly affected as a result of using a fluxing agent containing lead (and not reclaiming the lead). In that regard, it also would be appropriate for the State to further examine the claim that any lead contained in the sand will be rendered unleachable as a result of the smelting process. It is not clear that smelting processes uniformly produce slag which passes the TCLP test for lead.

Conclusions

In line with the guidance provided above, the foundry will need to follow hazardous waste management requirements in storing and shipping the sand, including all applicable requirements regarding foreign shipments and the use of a hazardous waste manifest. However, this does not preclude the foundry from sending the sand to the Canadian smelter, with the continued approval of the Canadian government.

If the NHDES believes that regulatory relief is appropriate for foundry sand heading for both reuse and reclamation, it should consult further with this Region about whether the NHDES could grant a variance consistent with 40 CFR §§ 260.30 and 260.31. The NHDES will have the authority to grant such variances for Toxicity Characteristic (TC) as well as non-TC wastes, once it obtains authorization of its TC Rule. However, it may be appropriate to limit consideration of any variances to situations where lead is being reclaimed. It is not clear that sending spent sand to a copper smelter is an environmentally preferable outcome which should be encouraged by reducing regulation, given that the sand's lead ends up disposed with the smelter's slag.

For CRTs being sent to smelters, regulatory relief should be provided once the NHDES completes its plan to include CRTs in its Universal Waste Rule. Keeping streamlined UWR regulations in place seems preferable to determining that there is a total exemption.

If you have any questions regarding this letter, please do not hesitate to contact either Stephen Yee of the Hazardous Waste Unit, at (617) 918-1197 or Jeffry Fowley of the Office of Regional Counsel at (617) 918-1094.

Sincerely,

A handwritten signature in black ink, appearing to read "Marvin Rosenstein", with a long horizontal flourish extending to the right.

Marvin Rosenstein, Chief
Chemicals Management Branch

Enclosures

cc: G. Gosbee, Chief, Hazardous Waste Unit, EPA
K. Rota, Chief, RCRA Enforcement Unit, EPA
M. Hoagland, Chief, RCRA Corrective Action Unit, EPA
J. Miller, Chief, Waste Branch, MADEP
D. Sattler, Supervisor, WEED, CTDEP
L. Hellested, Chief, Waste Management, RIDEM
S. Ladner, Supervisor, Licensing Unit, MEDEP
P. Marshall, Chief, Hazardous Materials Management Division, VTDEC

Faxback 13539

9441.1992(13)

RCRA/Superfund/OUST Hotline Monthly Report Question

May 1992

2. Secondary Materials Used as Effective Substitutes for Commercial Products

Section 261.2(e)(1) excludes certain recycled secondary materials from the definition of solid waste. Section 261.2(e)(1)(ii) excludes materials which are recycled by being used or reused as effective substitutes for commercial products. Can a material that must be reclaimed prior to use or reuse as an effective substitute for a commercial product qualify for the exclusion in 261.2(e)(1)(ii)?

No, this exclusion applies only to materials which are used or reused without prior reclamation. The January 4, 1985, Federal Register (50 FR 619) discusses this exclusion and states that "[w]hen secondary materials are directly used as substitutes for commercial products...these materials are functioning as raw materials...and, thus, are not wastes." A material that must be reclaimed prior to use (or reuse) as an effective substitute for a commercial product is not being directly used (or reused), and so would not qualify for this exclusion.

12/6

Faxback 11900

9441.1995(10)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20469

March 8, 1995

Mr. Christian M. Richter
Washington Representative
American Foundrymen's Society
900 2nd St. N.E. Suite 109
Washington D.C. 20002

Dear Mr. Richter:

I am writing in response to your letter to me of October 31, 1994, and as a follow-up to the November 1994 and February 28, 1995 meetings between representatives for the American Foundrymen's Society (AFS) and the U.S. Environmental Protection Agency (EPA) on the regulatory status of spent foundry sand under the Resource Conservation and Recovery Act (RCRA). Thank you for reviewing with us the use and role of sands in the foundry process and reiterating the industry's concerns.

The two RCRA regulatory concerns at issue which you have raised are: 1) whether spent foundry sands are solid and hazardous wastes within the sand loop and at what point do they become wastes, and 2) what is the regulatory status under RCRA of the type of thermal reclamation units discussed at our meeting, which are used to remove clay and resin binders from spent sands prior to reuse in mold making. The opinions expressed below are based on your general factual description and thus necessarily represent our initial conclusions, not final agency action. In addition, nothing in this letter should be considered to compromise, or to address the merits of any enforcement actions.

With regard to the first issue, for reasons stated below, EPA believes that spent foundry sands are solid wastes at the point at which the mold is broken and the sand is separated from the casting at the shakeout table. These solid wastes are also hazardous wastes if they exhibit the characteristic of toxicity for lead or other hazardous constituents specified at 40 CFR 261.24. Moreover, the process of separating bits and pieces of metal, fines, core sand butts and other clumps of mold sand at the shakeout table and screen to create return sand (for reuse in the

moldmaking process) is a reclamation process. As we stressed at our last meeting, because the recycling process is generally exempt from RCRA regulation, the Agency believes that there is little or no regulatory impact under RCRA from this view for those foundry sands within the sand loop which are reclaimed through non-thermal processes. In particular, the Agency believes that the use of non-thermal reclamation processes for foundry sands will not subject foundries to any substantive requirements. Regarding the regulatory status of the type of thermal reclamation units discussed at our November meeting, EPA believes that these units are incinerators, which are subject to RCRA Subpart O standards under 40 CFR Parts 264 and 265.

The balance of this letter: 1) describes the foundry process and foundry sand management, 2) presents the basis for our regulatory analysis, 3) states EPA's belief with regard to foundry sand waste management, and 4) describes the next steps to be taken to assure proper compliance in the foundry industry with RCRA regulations and to reach a common understanding between EPA and AFS members.

1. Description of Foundry Processes/ Overview of Spent Foundry Sands Management

A. Description of Foundry Processes

Based on prior correspondence from representatives of AFS member companies and materials submitted to EPA by AFS during our November 16th meeting, our understanding of the typical foundry process is as follows. Foundries are facilities where ferrous and non-ferrous metal castings are produced. The metal castings are produced from sand molds and cores which have been formed in a separate moldmaking process. The sand molds and cores are formed by molding sand together with clay or resin binders. Organic solvents may be added to the resins to reduce their viscosity. After the metal castings are poured into the molds and cooled, the molds are broken to remove the castings at a table referred to as a "shakeout table".

In the process of breaking the molds, several things occur simultaneously. First, the casting is separated from the broken mold and core and sent off for cleaning. Second, sand fines become airborne and are typically collected under negative pressure in a vacuum aspiration tube located proximately to the shakeout table. These fines may be wetted and deposited into a tank where iron is added in an attempt to fix lead in the fines prior to disposing of them in municipal landfills or on-site industrial landfills. Third, the broken molds are placed into a reclamation process consisting of a vibratory drum with perforations and a series of

conveyors and screens.

Sand (hereafter referred to as return sand) which passes through the drum and screens is returned to the moldmaking process to be used to make new molds. The entire process of making sand molds and reclaiming return sand for producing new molds is referred to as the sand loop.

Some chunks of sand from the broken molds and cores cannot be broken down and are too large to fit through the drum/screening process. This sand together with bits and chunks of metal (referred to as tramp metal), is removed from the screening process and sent to a ball mill where the mixture is milled and remaining metal is removed for reinsertion into the casting process or sold for recycling. Iron may be added to the clumps of sand prior to or during the milling process in an attempt to fix lead in the sand. The milled sand is then sent to a municipal or on-site industrial landfill.

B. Overview of Spent Foundry Sand Management

As you mention in your incoming letter to EPA, AFS estimates that 100 million tons of sand used to make molds in the ferrous and non-ferrous foundry industry and that approximately 94 percent of these sands are reused within the industry. In an April 26, 1993 article of American Metals Market, AFS is quoted as estimating that only about 4 percent, or 240,000 tons of the estimated 6 million tons of discarded foundry sand are hazardous waste. The article indicates that this is particularly a problem with manufacturers of leaded brass. However, Dan Twarog, AFS Director of Research, indicated in this article that contamination of foundry sands "is not a huge problem".

Based on data submitted to EPA by brass foundries, most spent foundry sands which are hazardous wastes are classified as such because they exhibit the characteristic of toxicity for lead, D008. In addition, one brass foundry exporting its sands for use in Canada reported that the sand exhibited the characteristic of toxicity for cadmium, D006.

2. RCRA Subtitle C Regulatory Status of Spent Foundry Sands and Thermal Reclamation Unit

As stated above, AFS has raised two particular issues for EPA's consideration: 1) is spent foundry sand a solid waste and when is it generated, and 2) what is the regulatory status of thermal reclamation units for spent foundry sand. Each of these issues is discussed in turn.

A. Regulatory Status Under RCRA of Spent Foundry Sands and the Sand Reclamation Loop

Regarding the first issue, based on prior regulatory determinations, as well as the information you presented about typical foundry practices, it appears that spent foundry sands are "spent materials" being "reclaimed," and are therefore solid wastes. This determination is made based on the properties of the sand and the nature of typical foundry sand reclamation activities.

Used foundry sands are generated as solid wastes after being separated from the castings at the shakeout table. At this point, the used sand contains contaminants, such as chunks of brass, fines, and hard lumps of sand, that must be removed from the sand prior to its reuse in the making of molds. Thus, the used sand is a "spent material" because it is no longer fit for its original use without further processing. 40 CFR 261.1(c)(1).

The subsequent process of separating and screening return sand (sand which is fit to be reused in mold making), core butts (clumps of sand from the core molds which are bonded with resin binders and are unfit for mold making without further processing), lumps of clay-coated mold sand, fines, and metal pieces appears to be a "reclamation process." 40 CFR 261.1(c)(4).

When the spent sands enter the shakeout process, they are reclaimed through regeneration, which involves the removal of contaminants including core sand butts, fines; tramp metal and other clumps of sand too large to fit through the screens. As a spent material being reclaimed, the spent foundry sand constitutes a solid waste. Indeed, the Agency has so held on very similar facts. In the Matter of Lee Brass Company, RCRA Appeal No. 87-12 (August 1, 1989). EPA also determined on January 6, 1986 that spent foundry sands being reclaimed are solid and hazardous wastes, in correspondence to Mr. John Robbins, a project chemist for Kohler Co., about one year after the final rule amending the definition of solid waste was promulgated (see enclosure).

Once the return sands are completely reclaimed, removed from the reclamation process, and are being returned to the moldmaking process, they cease to be wastes and are no longer under RCRA jurisdiction. 40 CFR 261.3(c)(2)(i). The portion of spent sand which is not returned to the mold making process remains a solid and (if hazardous) hazardous waste.

Because this mechanical process of screening and separating hazardous spent foundry sand is a reclamation process, it is generally exempt from regulation under RCRA. 40 CFR 261.6(c)(1)

(exempting actual recycling processes from regulation unless otherwise specified).

However, with respect to the portion of foundry sands that is removed from the reclamation process and is not beneficially reused, foundries remain subject to all applicable RCRA standards for managing these materials under 40 CFR Part 262. These standards include manifesting and standards for storage in tanks, containers, drip pads and containment buildings, as set out in Section 262.34. In addition transporters of these hazardous wastes are subject to 40 CFR Part 263. Furthermore, foundries that treat these hazardous wastes in conformance with these less-than-90 day storage provisions would not be subject to RCRA permitting requirements. Our expectation is that operating foundries should be able to operate in ways such that they do not trigger requirements for RCRA permits pursuant to the Federal regulations.

EPA's views about the point of generation for jurisdiction purposes do not imply that we believe that the non-thermal reclamation process of screening and separating sand following the separation of the casting requires a RCRA Subtitle C permit. When this screening and separation of sand is part of a reclamation process, it is exempt from RCRA Subtitle C regulation. 40 CFR 261.6(c)(1). Nor does this opinion imply any belief on the part of the Agency that state regulation under Subtitle D of RCRA is warranted for nonhazardous foundry sands undergoing reclamation. The scope of our regulatory concern is limited to foundry sands which are considered characteristically hazardous under Subtitle C of RCRA.

Notwithstanding these points, EPA cannot agree that the point of generation occurs after the sand mold is separated from the casting. The AFS interpretation, that foundry sands are generated after processing at the shakeout table, would have two adverse effects that are potentially damaging to human health and the environment.

First, some foundries would be able to add iron to spent foundry sands which are destined for land disposal (including both clumps of sand molds and sand cores as well as sand fines that are collected from emissions from the shakeout table) and argue that the spent sands were solid wastes, but never hazardous waste. This argument would be based on the assumption that they were "generated" after the addition of iron, possibly masking the toxicity characteristic for lead. It would follow that these foundries would not be subject to standards required for hazardous waste generators treating characteristic wastes in tanks, notwithstanding that they are engaged in a classic treatment activity. Moreover, these iron-treated sands would not be subject

to Land Disposal Restriction treatment standards, thus possibly avoiding effective immobilization of the hazardous constituents in the sand fines. As we noted in our February meeting, for more discussion of the relationship between land disposal restriction standards and the process of adding iron filings to spent foundry sands, please see 60 FR 11702, 11731 (March 2, 1995).

The second effect of arguing that foundry sands are generated as wastes after their processing at the shakeout table would be to allow some foundries to incinerate hazardous sands "prior" to the generation of hazardous waste so that they may claim that the hazardous waste treatment activity is not regulated. Regardless of any attempt to conduct unregulated treatment, however, the fact remains that foundry sands are spent materials being reclaimed from the moment that they are separated from the castings.

AFS has argued that EPA is without jurisdiction to regulate spent foundry sands being reclaimed because the sand is "part of the industrial manufacturing process." However, courts have held that secondary materials which either: 1) are not returned to an ongoing production process or 2) have become part of the waste disposal problem are discarded and therefore can be solid wastes under RCRA. Also, the courts have consistently held that whenever a material stream is characterized by an element of discard, as when a brass foundry removes and disposes of spent sands from the sand loop, the material is part of the waste disposal problem and is subject to EPA's jurisdiction. See *American Petroleum Institute v. EPA*, 906 F.2d 729 (D.C. Cir. 1990); *American Mining Congress v. EPA*, 907 F.2d 1179 (D.C. Cir. 1990)(AMC II).

B. Regulatory Status Under RCRA of Thermal Sand Reclamation Units

For the reasons discussed below, the type of thermal sand reclamation unit discussed during our November meeting and presented in correspondence from AFS member companies appears to meet the Agency's definition of an incinerator and so is subject to regulation under 40 CFR Parts 264 and 265, Subpart O.

We understand that this type of thermal treatment unit consists of a combustion chamber that holds the spent sand and a firebox chamber immediately below, in which hot gases are generated by the combustion of natural gas. The two chambers are separated by a refractory membrane through which hollow ceramic tubes and "T" nozzles allow the hot combustion gases to move from the firebox to the combustion chambers. The flow of hot gases through the spent sand causes the combustion chamber to operate as a fluidized bed. Controlled flame combustion of the organic resins

occurs in the fluidized bed. As a result, the organic resins, binders and solvents are destroyed.

Under the Agency's regulatory regime, thermal treatment devices are classified as either boilers, industrial furnaces, incinerators, other interim status thermal treatment units, or miscellaneous permitted treatment units. Definitions of a boiler, industrial furnace, and incinerator are provided in 40 CFR 260.10. If a thermal treatment device does not meet the definition of boiler or industrial furnace, it is classified as an incinerator if it uses controlled flame combustion; if it does not, it is either an interim status thermal treatment unit (Part 265 Subpart P) or a miscellaneous permitted treatment unit (Part 264 Subpart X).

The thermal sand reconditioning device you presented to us is not a boiler because it does not recover and export energy. It does not meet the definition of an industrial furnace because it is not one of the enumerated devices listed as an industrial furnace in Section 260.10. Thus, our analysis focuses on whether the device should be regarded as either an incinerator or a miscellaneous/other treatment unit.

Given that the device uses controlled flame combustion to burn natural gas and that the combustion gases are exhausted into the combustion chamber containing the spent sand, the device should be classified as an incinerator. Among other considerations, although not dispositive in themselves, are: (1) the temperature in the combustion chamber would be carefully controlled to what is claimed to be the optimum combustion temperature of the resin contaminants; and (2) the temperature would be controlled by modulating the natural gas burner in the firebox, or, in some designs, burners in the combustion chamber itself.

AFS has maintained that because, in its opinion, sand which is part of the sand loop is not discarded and therefore not a solid waste, that spent foundry sand which is destined for a thermal reconditioning unit is also not a solid waste. For this reason, AFS maintains that thermal recondition units of the type described in our November 16 meeting are not incinerators, but rather part of a manufacturing process used to recondition sand for reuse within the mold making process.

For the reasons stated above, the AFS argument that spent foundry sand is not a solid waste does not appear to be sound. To reiterate, the sand from the broken mold is not fit for its original use as a mold without substantial reprocessing. If the sand is reprocessed through thermal reconditioning rather than or

in addition to the physical screening and separation process, it is all the more part of the waste management problem because of the fact that incinerators are a type of treatment technology which clearly engages in waste management. In this regard, the placement of hazardous foundry sand into a thermal combustion unit is analogous to the placement of secondary materials into surface impoundments. Both activities may result in the release of hazardous waste to the environment if improperly managed. AFS' argument that this type of thermal reconditioning unit is simply reconditioning sand for reuse in the moldmaking process ignores the fact that the organic resins, binders and solvents used to construct the molds are destroyed in the incineration process. The potential release of products of incomplete combustion, such as dioxin and furans, as well as volatile metals such as lead and cadmium, makes clear that management activities using these units can be viewed as part of the waste disposal problem. In addition, the build up of metallic lead in the resulting sand in a more leachable form likewise supports this conclusion. Thermal waste treatment units such as incinerators, like surface impoundments, are a central focus of the RCRA program. RCRA Section 3004(o)(2). As such, these units are clearly within RCRA jurisdiction and materials placed into them can be viewed as discarded and therefore solid wastes. AMC II, 907 F.2d at 1186.

C. Other RCRA Regulatory Issues Regarding Spent Foundry Sands

The Agency notes that there is one circumstance when spent foundry sands are not solid wastes. Spent foundry sand is not a solid waste under RCRA when legitimately used or reused without reclamation as an effective substitute for a commercial product. 40 CFR 261.2(e)(1)(ii). It is our understanding that some foundry sands are currently being used as a substitute for virgin silica sand as a fluxing agent in primary copper smelting operations in North America. Please be aware, however, that under Section 3006 of RCRA individual States can be authorized to administer and enforce their own hazardous waste programs in lieu of the Federal program. When States are not authorized to administer their own program, the appropriate EPA Regional office administers the program and is the appropriate contact for any case-specific determinations. Please note as well that under Section 3009 of RCRA, States retain authority to promulgate regulatory requirements that are more stringent than Federal regulatory requirements.

3. EPA Concerns About Environmental Effects of Foundry Sand Management

Please understand that the potential environmental concern is not with sand per se. Rather, EPA is concerned that in some

foundries, the used sand mixtures contain sufficient hazardous constituents (e.g., lead, cadmium, toxic organic compounds) to pose a threat to human health and the environment if managed improperly. EPA has three major environmental concerns regarding management of spent foundry sand: 1) landfill disposal of spent foundry sand, including treatment with iron prior to land disposal, 2) thermal processing of spent foundry sand, and 3) the storage and actual management practices for spent foundry sands prior to disposal.

A. Landfill Disposal of Spent Foundry Sands; Treatment of Lead-Contaminated Sand With Iron Filings

As discussed in our meeting and indicated in prior correspondence on behalf of AFS member companies, some portion of spent sand is continuously removed from the sand loop in some foundries and disposed of in landfills. For those foundries whose sand contains hazardous constituents, such as lead, cadmium and organics, the Agency has a strong interest in seeing that these sands are properly managed. Left untreated, lead-contaminated sands may result in releases to groundwater, possibly threatening nearby drinking water wells. Improper disposal of untreated hazardous waste has historically led to many landfills becoming Superfund sites. Thus, when foundry sands exhibiting the hazardous characteristic for lead are land disposed, these materials must be properly treated and disposed of in appropriate facilities in order to prevent the creation of future hazardous waste remediation sites.

Effective treatment for hazardous waste being land disposed must assure the long-term immobilization of hazardous constituents to minimize potential short and long term threats to human health and the environment. RCRA Section 3004(m). We understand that some foundries attempt to treat their hazardous waste foundry sand with iron filings prior to land disposal, in an effort to reduce the leachability of the hazardous constituents (typically lead) so that the waste can be land disposed. EPA is concerned, however, that the addition of iron filings to lead-contaminated foundry sands is ineffective as a long-term treatment method and that it could constitute impermissible dilution under 40 CFR 268.3.

In developing the Land Disposal Restriction program in the Hazardous and Solid Waste Amendments of 1984 (HSWA), Congress stated that only dilution that occurs during the normal manufacturing process may be taken into account in setting section 3004(m) treatment standards. Senate Report No. 284. 98th Cong. 1st Sess. at 17. Since the addition of iron occurs only to stabilize lead in the spent sand prior to disposal, it does not appear to be part of a normal production process.

B. Thermal Reclamation of Spent Foundry Sands

Second, we understand that there is an increasing trend in the industry towards using a type of thermal reclamation unit that involves combustion of the organic constituents in the foundry sand mixture. Combustion of hazardous waste is, of course, a significant Agency concern. See U.S. Environmental Protection Agency Strategy For Hazardous Waste Minimization and Combustion, EPA/530-R-94 04, November 1994. The Agency is concerned about the potential for lead and other metals to be emitted from the units. Toxic organics, including products of incomplete combustion such as dioxins, also may be emitted. In addition, we understand that the thermal treatment of sands may result in increased leachability of lead in sand due to the build up of metallic lead in the sand.

C. Storage Prior to Disposal and Other Management of Spent Foundry Sands

Third, we did not discuss in the meeting in any depth what are the material management practices within the industry. An EPA representative did, however, note that storage of used sands that exhibit a hazardous characteristic because of lead from the metal castings could pose classic waste management types of risks, depending on how the material is stored and handled.

We believe that these three types of environmental concerns address your question of how we could consider the sand being reclaimed for further on-site use to be part of the waste management problem. These concerns underlie the existing regulatory structure which we believe classifies the sands after their use in the casting process as a "spent material," which is being "reclaimed" prior to reuse.

4. Compliance Assurance and Industry Outreach

We understood you to say to us that some members of the industry do not think of the foundry sands being reconditioned and reclaimed for reuse on-site- as a "waste" being managed at the foundry. If that is the case, there may be a need to work with you to change practices within the industry. We hope that the American Foundrymen's Society and other groups would be willing to help us with that task and that we can organize the resources within EPA to work with you on bringing about that change.

Conclusion

If you have any questions regarding the status of foundry sands as solid and hazardous wastes under RCRA, please call

Michael Petruska of my staff at (202) 260 8551. If you have any questions about the status of thermal reclamation units under RCRA as incinerators, please contact Robert Holloway of my staff at (703) 308-8461. Again, we appreciate your patience in arranging for the meeting and your coming to Washington to discuss the issue with us.

Sincerely,

Michael Shapiro, Director
Office of Solid Waste

Enclosure

Attachment

American Foundrymen's Society Inc.
900 2nd Street, N.E.
Suite 109
Washington, D.C. 20002

October 31, 1994

Michael Shapiro, Director
Office of Solid Waste, M2101
USEPA Waterside Mall
401 M Street S.W.
Washington, D.C. 20410

Dear Mr. Shapiro:

Representatives of the American Foundrymen's Society (AFS) would like to meet with you and David Bussard to discuss several critical policy issues raised by recent Region 6 enforcement actions against foundries. We are concerned that Region 6 has seriously misapplied current USEPA regulatory policy regarding solid waste and recycling under the Resource Conservation and Recovery Act (RCRA).

I. BACKGROUND

EPA Region 6 officials have targeted two brass and bronze foundries for enforcement action under RCRA. Region 6 contends that one of the industry's primary raw materials -- sand -- when reused in an ongoing production process on-site, is a solid waste. It is our understanding that the set of facts in each of these cases is unique.

However, the two cases raise important questions regarding the

agency's application of RCRA solid waste and recycling policy to metalcasting production, and potentially other manufacturing processes as well.

A vast majority of the nearly 3200 U.S. foundries cast metals -- such as iron, steel, and various nonferrous alloys -- in sand molds. The industry as a whole reuses in production nearly 94 percent of the 100 million tons of total sand throughput annually, which translates into an impressive recovery rate of 94 percent. The ability to repeatedly reuse sand to make world-class castings saves virgin materials, reduces industry costs, and preserves the nation's diminishing landfill capacity.

II. POLICY RAMIFICATIONS

Sand reuse by foundries -- a conventional industry practice -- is an integral part of the production process. Not only is regulatory control of this extremely low-risk component of production unnecessary, but from a practical standpoint, constraining or regulating sand reuse under RCRA only encourages disposal -- not recovery -- of high volumes of raw material.

The Region 6 approach to sand reuse under the RCRA regulatory framework is a wholly novel interpretation of the law. If allowed to stand, it could have dramatic consequences for foundries nationwide, particularly small facilities (80 percent of the nation's foundries employ fewer than 100 employees).

III. ACTION NEEDED

We do recognize the agency's interest in constraining certain recycling practices and mismanagement of materials. Accordingly, we would like to discuss with you the regulatory status of foundry sand at various points in the metal casting process. The industry has never before encountered Region 6's peculiar interpretation of RCRA during the history of its involvement with the agency's solid and hazardous waste program. In fact, it has never occurred to us, nor EPA staff with whom we have interacted, that sand is a solid waste when reused in ongoing, on-site production of molds to make castings.

The potential consequences for the foundry industry, as well as for the agency's waste program, warrant a thorough airing of this issue at agency headquarters. Ours is truly a perfect illustration of the ambiguity and confusion inherent in current solid waste and recycling policy under RCRA.

Your consideration of these issues is greatly appreciated. We have sent a similar letter to Mr. Bussard, and will be contacting your office to arrange a convenient date and time to meet.

Sincerely,

Christian M. Richter
AFS Washington Representative

cc: David Bussard, EPA Characterization and Assessment Division
Elliot Laws, Asst. Administrator for Solid Waste and Emergency Response
Leon Hampton, EPA Office of Small and Disadvantaged Business
Utilization
Karen Brown, EPA Small Business Ombudsman
Mike Stahl, EPA Office of Enforcement

Faxback 11426

9441.1989(19)

OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

APR 26 1989

MEMORANDUM

SUBJECT: F006 Recycling

FROM: Sylvia K. Lowrance, Director
Office of Solid Waste (OS-300)

TO: Hazardous Waste Management Division Directors
Regions I-X

It has come to the attention of EPA Headquarters that many of the Regions and authorized States are being requested to make determinations on the regulatory status of various recycling schemes for F006 electroplating sludges. In particular, companies have claimed that F006 waste is being recycled by being used as: (1) an ingredient in the manufacture of aggregate, (2) an ingredient in the manufacture of cement, and (3) feedstock for a metals recovery smelter. The same company may make such requests of more than one Region and/or State. Given the complexities of the regulations governing recycling vs. treatment and the definition of solid waste, and the possible ramifications of determinations made in one Region affecting another Region's determination, it is extremely important that such determinations are consistent and, where possible, coordinated.

Two issues are presented. The first issue is whether these activities are legitimate recycling, or rather just some form of treatment called "recycling" in an attempt to evade regulation. Second, assuming the activity is not sham recycling, the issue is whether the activity is a type of recycling that is subject to regulation under sections 261.2 and 261.6 or is it excluded from our authority.

With respect to the issue of whether the activity is sham recycling, this question involves assessing the intent of the owner or operator by evaluating circumstantial evidence, always

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a difficult task. Basically, the determination rests on whether the secondary material is "commodity-like." The main environmental considerations are (1) whether the secondary material truly has value as a raw material-product (i.e., is it likely to be abandoned or mismanaged prior to reclamation rather

than being reclaimed?) and (2) whether the recycling process (including ancillary storage) is likely to release hazardous constituents (or otherwise pose risks to human health and the environment) that are different from or greater than the processing of an analogous raw material/product. The attachment to this memorandum sets out relevant factors in more detail.

If the activity is not a sham, then the question is whether it is regulated. If F006 waste is used as an ingredient to produce aggregate, then such aggregate would remain a solid waste if used in a manner constituting disposal (e.g., road-base material) under sections 261.2(c)(1) and 261.2(e)(2)(i) or if it is accumulated speculatively under section 261.2(e)(2)(iii). Likewise, the F006 "ingredient" is subject to regulation from the point of generation to the point of recycling. The aggregate product is, however, entitled to the exemption under 40 CFR 266.20(b), as amended by the August 17, 1988, Land Disposal Restrictions for First Third Scheduled Wastes final rule (see 53 FR 31197 for further discussion). However, if the aggregate is not used on the land, then the materials used to produce it would not be solid wastes at all, and therefore neither those materials nor the aggregate would be regulated (see section 261.2(e)(1)(i)).

Likewise, cement manufacturing using F006 waste as an ingredient would yield a product that remains a solid waste if it is used in a manner constituting disposal, also subject to section 266.20(b). There is an additional question of whether the cement kiln dust remains subject to the Bevill exclusion. In order for the cement kiln dust to remain excluded from regulation, the owner or operator must demonstrate that the use of F006 waste has not significantly affected the character of the cement kiln dust (e.g., demonstrate that the use of F006 waste has not significantly increased the levels of Appendix VIII constituents in the cement kiln dust leachate). [NOTE: This issue will be addressed more fully in the upcoming supplemental proposal of the Boiler and Industrial Furnace rule, which is pending Federal Register publication.]

For F006 waste used as a feedstock in a metals recovery smelter, the Agency views this as a recovery process rather than use as an ingredient in an industrial process and, therefore, considers this to be a form of treatment that is not currently regulated (see sections 261.2(c) and 261.6(c)(1)). Furthermore, because this is a recovery process rather than a production process, the F006 waste remains a hazardous waste (and must be

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managed as such prior to introduction to the process), and the slag from this process would normally be considered a "derived from" F006 waste. However, for primary smelters, the slag may be considered subject to the Bevill exclusion provided that the owner or operator can demonstrate that the use of F006 waste has not significantly affected the hazardous constituent content of the slag (i.e., make a demonstration similar to the one discussed above for the cement kiln dust). [NOTE: In the

supplemental proposal of the Boiler and Industrial Furnace rule noted above, the Agency will be proposing a definition of "indigenous waste" based on a comparison of the constituents found in the waste to the constituents found in an analogous raw material. Should the F006 waste meet the definition of an "indigenous waste," the waste would cease to be a waste when introduced the process and the slag would not be derived from a hazardous waste.]

Also, you should be aware that OSW is currently reevaluating the regulations concerning recycling activities, in conjunction with finalizing the January 8, 1988 proposal to amend the Definition of Solid Waste. While any major changes may depend on RCRA authorization, we are considering regulatory amendments or changes in regulatory interpretations that will encourage on-site recycling, while ensuring the protection of human health and the environment.

Headquarters is able to serve as a clearinghouse to help coordinate determinations on whether a specific case is "recycling" or "treatment" and will provide additional guidance and information, as requested. Ultimately, however, these determinations are made by the Regions and authorized States. Attached to this memorandum is a list of criteria that should be considered in evaluating the recycling scheme. Should you receive a request for such a determination, or should you have questions regarding the criteria used to evaluate a specific case, please contact Mitch Kidwell, of my staff, at FTS 475-8551.

Attachment

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CRITERIA FOR EVALUATING WHETHER A WASTE IS BEING RECYCLED

The difference between recycling and treatment is sometimes difficult to distinguish. In some cases, one is trying to interpret intent from circumstantial evidence showing mixed motivation, always a difficult proposition. The potential for abuse is such that great care must be used when making a determination that a particular recycling activity is to go unregulated (i.e., it is one of those activities which is beyond the scope of our jurisdiction). In certain cases, there may be few clear-cut answers to the question of whether a specific activity is this type of excluded recycling (and, by extension, that a secondary material is not a waste, but rather a raw material or effective substitute); however, the following list of criteria may be useful in focusing the consideration of a specific activity. Here too, there may be no clear-cut answers, but, taken as a whole, the answers to these questions should help draw the distinction between recycling and sham recycling or treatment.

(1) Is the secondary material similar to an analogous raw material or product?

Does it contain Appendix VIII constituents not found in the analogous raw material/product (or at higher levels)?

Does it exhibit hazardous characteristics that the analogous raw material/product would not?

Does it contain levels of recoverable material similar to the analogous raw material/product?

Is much more of the secondary material used as compared with the analogous raw material/product it replaces? Is only a nominal amount of it used?

Is the secondary material as effective as the raw material or product it replaces?

(2) What degree of processing is required to produce a finished product?

Can the secondary material be fed directly into the process (i.e., direct use) or is reclamation (or pretreatment) required?

How much value does final reclamation add?

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(3) What is the value of the secondary material?

Is it listed in industry news letters, trade journals, etc.?

Does the secondary material have economic value comparable to the raw material that normally enters the process?

(4) Is there a guaranteed market for the end product?

Is there a contract in place to purchase the "product" ostensibly produced from the hazardous secondary materials?

If the type of recycling is reclamation, is the product used by the reclaimer? The generator? Is there a batch tolling agreement? (Note that since reclaimers are normally TSDFs, assuming they store before reclaiming, reclamation facilities present fewer possibilities of systemic abuse).

Is the reclaimed product a recognized commodity? Are there industry-recognized quality specifications for the product?

(5) Is the secondary material handled in a manner

consistent with the raw material/product it replaces?

Is the secondary material stored on the land?

Is the secondary material stored in a similar manner as the analogous raw material (i.e., to prevent loss?)

Are adequate records regarding the recycling transactions kept?

Do the companies involved have a history of mismanagement of hazardous wastes?

(6) Other relevant factors.

What are the economics of the recycling process?

Does most of the revenue come from charging generators for managing their wastes or from the sale of the product?

Are the toxic constituents actually necessary (or of sufficient use) to the product or are they just "along for the ride."

These criteria are drawn from 53 FR at 522 (January 8, 1988); 52 FR at 17013 (May 6, 1987); and 50 FR at 638 (January 4, 1985).



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095

(603) 271-2900 FAX (603) 271-2456
May 19, 2000

MAY 30 2000



MAY 30 2000

Mr. Edward K. McSweeney, Associate Director
Office of Waste Policy
USEPA Region 1
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Dear Mr. McSweeney:

The New Hampshire Department of Environmental Services (NHDES) has received a request for a regulatory determination from a foundry located in New Hampshire. The foundry has a bronze foundry operation that generates spent foundry sand. This foundry sand is hazardous waste for the characteristic of lead at 25 Parts Per Million (PPM) under the Toxicity Characteristic Leaching Procedure. The foundry has proposed delivering this spent foundry sand to Noranda Metallurgy, Inc., Horne Smelter, Rouyn-Noranda, Quebec, Canada (Noranda) as an effective substitute for a commercial product (i.e., silica flux) per 40 CFR 261.2(e)(1)(ii).

The foundry supplied an assay of the spent foundry sand to confirm that Noranda could use this spent foundry sand as a substitute for silica flux. The spent foundry sand is reported to contain 60% silica sand, 32% copper, 2% bentonite clay, 2,000 ppm total lead and 2,500 ppm total zinc. The foundry applied documentation from Noranda that this material is an effective substitute in their smelting operation as a fluxing agent and would be directly reused without any preparation. The foundry supplied documentation from the Canadian Ministry of the Environment approving this material as a fluxing agent. In addition, the foundry provided documentation that the toxics (lead) contained in the spent foundry sand will be vitrified and unleachable as a result of the smelting process.

Noranda is a primary Copper Smelter, as a primary copper smelter, the copper that is contained in the bronze (32% of the total weight) will be reclaimed. NHDES is requesting EPA's interpretation on the following separate scenarios to clarify the recycling of spent foundry sand issue:

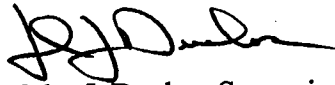
1. The spent foundry sand is sent to a primary copper smelter as an effective substitute for silica flux with reclamation of the copper but no reclamation of the lead. In this scenario would the spent foundry sand be considered a solid waste?
2. As an alternative, the spent foundry sand is sent to a primary lead smelter as an effective substitute for silica flux with reclamation of the lead. In this scenario would the spent foundry sand be considered a solid waste?
3. If the above two scenarios were sent to a secondary smelter, would this change EPA's interpretations?

Mr. McSweeney
Page 2

DES

Should you have any questions, please feel free to contact David Bowen, Waste Management Specialist or myself at (603) 271-2942.

Sincerely,



John J. Duclos, Supervisor
Hazardous Waste Compliance Section
Waste Management Division

RCRA/DB

cc: G. Lombardo, EPA/New England
J. Miller, Chief, Waste branch, MADEP
D. Sattler, Supervisor, WEED, CTDEP
L. Hellested, Chief, Waste Management, RIDEM
S. Ladner, Supervisor, Licensing Unit, MEDEP
P. Marshall, Chief, Hazardous Materials Management Division, VTDEC



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

176

March 16, 2001

John J. Duclos, Supervisor
Hazardous Waste Compliance Section
Waste Management Division
N.H. Department of Environmental Services
6 Hazen Drive
P.O. Box 95
Concord, N.H. 03302-0095

Re: Request for Regulatory Interpretation Regarding Spent Foundry Sand

Dear Mr. Duclos:

This is in response to your letter dated May 19, 2000 which requests a Regulatory Interpretation from EPA Region I. In that letter, you state that a foundry in New Hampshire is proposing to ship spent sand to the Noranda Mettallurgy, Inc. Horne Smelter in Quebec, Canada, a primary copper smelter. The sand reportedly contains 60% silica, 32% copper and 2,000 ppm total lead. It fails the Toxicity Characteristic Leaching Procedure (TCLP) test for lead. You state that the foundry has supplied documentation to the New Hampshire Department of Environmental Services (NHDES) that the smelter will use the sand as a fluxing agent (in addition to reclaiming the copper), that the use as a fluxing agent has been approved by the Canadian Ministry of the Environment, and that the lead will be vitrified and rendered "unleachable" as a result of the smelting process. You ask whether the sand should be considered a hazardous waste subject to regulation when shipped to this primary copper smelter for both use as a fluxing agent and reclamation of the copper. You further ask whether it would make any difference if the sand instead was shipped to a primary lead smelter or to a secondary copper or lead smelter.

In our opinion, the spent foundry sand would be subject to regulation as a hazardous waste when shipped to the primary copper smelter for reclamation of the copper, even if also used as a fluxing agent. It also would be subject to regulation if shipped to a primary lead smelter or to a secondary copper or lead smelter for reclamation of either copper or lead even if also used as a fluxing agent.

Explanation of Position

Under 40 CFR § 261.2(e)(1)(ii), a secondary material being "used or reused" as an "effective substitute" for a commercial product is exempt from regulation under certain circumstances. However, this exemption does not apply if the material must be reclaimed before being used or reused. The definition of "used or reused" in 40 CFR 261.1(c)(5)(i) states that use/reuse is not

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occurring "if distinct components of the material are recovered as separate end products (as when metals are recovered from metal-containing secondary materials)." As the EPA explained in the RCRA/Superfund/OUST Hotline Monthly Report (May 1992)(copy enclosed), the 40 CFR § 261.2(e)(1)(ii) exemption only applies when materials are functioning as raw materials by being directly used or reused, and "a material that must be reclaimed prior to use (or reuse) as an effective substitute for a commercial product is not being directly used (or reused) and so would not qualify for the exemption."

When components of a hazardous spent material are recovered, the spent material is considered to be "reclaimed" (see 40 CFR § 261.1(c)(4)) and is subject to regulation. 40 CFR § 261.2(c)(3) and Table 1. This is so whether it is a hazardous waste component like lead or a non-hazardous waste component like copper that is being recovered. The EPA regulations state that a material is "reclaimed" if it is "processed to recover a usable product." 40 CFR § 261.1(c)(4). Such processing occurs whether it is a hazardous or a non-hazardous component that is being recovered.

Also, spent materials being reclaimed are regulated whether they are sent to primary or secondary smelters. Spent materials sent to operations such as secondary smelters which engage generally in reclamation clearly are subject to regulation. In adopting its current regulations regarding recycling, the EPA also interpreted its regulations to mean that certain secondary materials including spent materials should be regulated when sent to primary smelters. The EPA rejected the argument that all secondary materials sent to primary smelters for material recovery should not be regulated since such materials would be substitutes for normal raw material feedstock. Rather, the EPA stated, "when a secondary material is to be recovered in an operation different from the one in which it was generated, we believe there is a continuum with secondary materials becoming more waste-like the more the recovery operation differs from the original process, and the more physically removed the recovery operation is from the original process." 50 Fed. Reg. 614, 640 (January 4, 1985).

Finally, we are advised that the EPA Office of Solid Waste (OSW) consistently has taken the position that spent materials which are both reused (e.g., as a fluxing agent) and reclaimed (e.g., for recovery of lead or copper) are subject to regulation. When foundry sand is sent for reclamation, the overall transaction has significant aspects of waste management, even if the sand also is useable as a fluxing agent. This is particularly so when foundry sand is sent to a copper smelter, since this transaction involves using the smelter to treat and dispose of the sand's lead as well as to recover the copper.

We recognize that arguments have been advanced in favor of changing EPA's interpretations so as to exempt from regulation materials which are both reused and reclaimed, or materials sent to primary smelters or materials sent to lead smelters. We believe that discussions of these issues should continue, including through the Definition of Solid Waste network. However, we believe that the past EPA interpretations described above should be adhered to unless and until they are changed at the national level.

Prior Consistent Guidance

By letter dated March 8, 1995 to the American Foundrymen's Society (copy enclosed), OSW determined that spent foundry sand being reclaimed was subject to regulation. OSW currently is reexamining whether spent foundry sand which undergoes only limited processing prior to being reused on site should continue to be subject to regulation. However, nothing in this reexamination calls into question the Agency's longstanding view that spent materials sent off site for reclamation are subject to regulation.

On page 8 of the March 8, 1995 letter, OSW stated that, "there is one circumstance where spent foundry sands are not solid wastes. Spent foundry sand is not a solid waste under RCRA when legitimately used or reused without reclamation as an effective substitute for a commercial product, 40 CFR § 261.2(e)(1)(ii). It is our understanding that some foundry sands are currently being used as a substitute for virgin silica sand as a fluxing agent in primary copper smelter operations in North America." However, as emphasized to this Region by Paul Borst, one of the authors of the letter (with whom this Region has consulted), this exemption was stated as applying only if there was legitimate reuse without reclamation. In contrast, in the situation inquired about in your letter, any reuse will occur along with reclamation.

That the current company's foundry sand is 32% copper and is to be reclaimed also distinguishes this situation from that addressed in this Region's regulatory interpretation to the NHDES dated March 4, 1994, involving foundry sand that contained only 2-5% copper which was not going to be reclaimed. Rather, the situation inquired about is similar to that about which this Region and the NHDES consulted last year, regarding the proposed shipment by the DM Electronics Recycling Corporation (DMC) of CRTs to a smelter for lead reclamation. By letter to DMC dated June 2, 2000, you correctly noted that the CRTs were subject to regulation since they were being sent for reclamation, even if they also were going to be used as a fluxing agent. As explained above, we believe that the same rules that apply when spent CRTs are sent for reclamation of lead should apply when spent foundry sand is sent for reclamation of copper.

Additional Issue

There may be an additional reason why the foundry sand should not be exempt from regulation. Even if the foundry sand was being sent for reuse as a fluxing agent without reclamation, the reuse would have to be shown to be "legitimate" for the section 261.2(e)(ii) exemption to apply. It is not clear that the proposed reuse of the sand as a fluxing agent has been shown to be "legitimate" in accordance with the criteria set out in the April 26, 1989 Memorandum from then OSW Director Sylvia Lowrance (Lowrance Memorandum).

It should be emphasized that the Region is not making any determination on this issue. The Region does not have the company's request in front of us or the State's complete file. Also, the Region has not sought to resolve this issue since, for the reasons explained above, it is our opinion that the foundry sand will be subject to regulation whether or not its proposed use as a

fluxing agent is "legitimate."

However, we note that all of the criteria in the Lowrance Memorandum would need to be considered to determine whether the proposed reuse is "legitimate." In particular, the following issues would need to be addressed. First, the State would need to determine whether the smelter will pay the foundry for the sand or the foundry will need to pay the smelter to take the sand. If the foundry must pay the smelter to take the sand, the foundry would need to address the perceived conflict between classifying the sand as an effective substitute for a product and having to pay the smelter to take the "product." See Lowrance Memorandum, criteria (3). At minimum, the foundry and smelter would need to demonstrate that the smelter would decrease purchases of an equivalent amount of virgin sand when using the foundry sand, i.e., that the foundry sand truly would take the place of another product. See also Lowrance Memorandum, criteria (1). This is a particular concern here since the percentage of silica sand in the company's spent material (60%) is below the percentages typically found in spent foundry sand (80 - 90% range). Second, the foundry would need to address how the spent sand would be handled throughout its life cycle, if exempted from regulation. If the sand was mishandled (e.g., stored on the ground), this would be inconsistent with its claimed status as a valuable product. See Lowrance Memorandum, criteria (5). Finally, the foundry would need to address the "toxics along for the ride" issue raised by the fact that the spent sand differs from virgin silica in that it contains high quantities of lead. See Lowrance Memorandum, criteria (1) and (6). In particular, the foundry and smelter would need to document whether the lead content in the smelter's slag would be significantly affected as a result of using a fluxing agent containing lead (and not reclaiming the lead). In that regard, it also would be appropriate for the State to further examine the claim that any lead contained in the sand will be rendered unleachable as a result of the smelting process. It is not clear that smelting processes uniformly produce slag which passes the TCLP test for lead.

Conclusions

In line with the guidance provided above, the foundry will need to follow hazardous waste management requirements in storing and shipping the sand, including all applicable requirements regarding foreign shipments and the use of a hazardous waste manifest. However, this does not preclude the foundry from sending the sand to the Canadian smelter, with the continued approval of the Canadian government.

If the NHDES believes that regulatory relief is appropriate for foundry sand heading for both reuse and reclamation, it should consult further with this Region about whether the NHDES could grant a variance consistent with 40 CFR §§ 260.30 and 260.31. The NHDES will have the authority to grant such variances for Toxicity Characteristic (TC) as well as non-TC wastes, once it obtains authorization of its TC Rule. However, it may be appropriate to limit consideration of any variances to situations where lead is being reclaimed. It is not clear that sending spent sand to a copper smelter is an environmentally preferable outcome which should be encouraged by reducing regulation, given that the sand's lead ends up disposed with the smelter's slag.

For CRTs being sent to smelters, regulatory relief should be provided once the NHDES completes its plan to include CRTs in its Universal Waste Rule. Keeping streamlined UWR regulations in place seems preferable to determining that there is a total exemption.

If you have any questions regarding this letter, please do not hesitate to contact either Stephen Yee of the Hazardous Waste Unit, at (617) 918-1197 or Jeffry Fowley of the Office of Regional Counsel at (617) 918-1094.

Sincerely,

A handwritten signature in black ink, appearing to read "Marvin Rosenstein", with a long horizontal flourish extending to the right.

Marvin Rosenstein, Chief
Chemicals Management Branch

Enclosures

cc: G. Gosbee, Chief, Hazardous Waste Unit, EPA
K. Rota, Chief, RCRA Enforcement Unit, EPA
M. Hoagland, Chief, RCRA Corrective Action Unit, EPA
J. Miller, Chief, Waste Branch, MADEP
D. Sattler, Supervisor, WEED, CTDEP
L. Hellested, Chief, Waste Management, RIDEM
S. Ladner, Supervisor, Licensing Unit, MEDEP
P. Marshall, Chief, Hazardous Materials Management Division, VTDEC

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RCRA/Superfund/OUST Hotline Monthly Report Question

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2. Secondary Materials Used as Effective Substitutes for Commercial Products

Section 261.2(e)(1) excludes certain recycled secondary materials from the definition of solid waste. Section 261.2(e)(1)(ii) excludes materials which are recycled by being used or reused as effective substitutes for commercial products. Can a material that must be reclaimed prior to use or reuse as an effective substitute for a commercial product qualify for the exclusion in 261.2(e)(1)(ii)?

No, this exclusion applies only to materials which are used or reused without prior reclamation. The January 4, 1985, Federal Register (50 FR 619) discusses this exclusion and states that "[w]hen secondary materials are directly used as substitutes for commercial products...these materials are functioning as raw materials...and, thus, are not wastes." A material that must be reclaimed prior to use (or reuse) as an effective substitute for a commercial product is not being directly used (or reused), and so would not qualify for this exclusion.